

ALASKA RETIREMENT MANAGEMENT BOARD

ACTUARIAL COMMITTEE
November 30, 2022

STATE OF ALASKA
ALASKA RETIREMENT MANAGEMENT BOARD
ACTUARIAL COMMITTEE MEETING
November 30, 2022 – 1:00 p.m.

Atwood Conference Center, Rooms 102/104
550 W. 7th Ave., Anchorage, AK

Call In (Audio Only): 1-907-202-7104

Code: 157 887 146#

- I. Call to Order**
- II. Roll Call**
- III. Public Meeting Notice**
- IV. A. Approval of Agenda**
B. Approval of Minutes – September 14, 2022
- V. Public / Member Participation, Communications and Appearances**
*(Three Minute Limit. Callers may need to press *6 to unmute.)*
- VI. GRS Perspective on Normal Cost and Health Trust Funding Levels**
Paul Wood & Bill Detweiler, GRS
- VII. Discussion: Inflation Outlook/ Projections**
David Kershner, Buck
Paul Wood, GRS
- VIII. Valuations and Actuary Review**
 - A. PERS / TRS Preliminary 2022 Valuation Results**
David Kershner & Stephen Oates, Buck
 - B. Inflation Reduction Act of 2022 – Impacts on Medicare Part D**
Stephen Oates, Buck
 - C. Actuary Review**
Paul Wood & Bill Detweiler, GRS
- IX. Periodic Self-Assessment**
- X. Review Committee Charter**
- XI. Future Meetings**
 - A. Calendar Review**
 - B. Agenda Items**
 - C. Requests / Follow-Ups**
- XII. Other Matters to Properly Come Before the Committee**
- XIII. Public / Members Comment**
- XIV. Adjournment**

**ALASKA RETIREMENT MANAGEMENT BOARD
ACTUARIAL COMMITTEE MEETING
HYBRID/TEAMS**

**September 14, 2022
1:30 p.m.**

**Originating at:
Atwood Conference Center
550 West 7th Avenue, 1st Floor
Anchorage, Alaska 99501**

Trustees Present:

Allen Hippler, Chair
Donald Krohn
Bob Williams
Michael Williams

Dennis Moen
Sandra Ryan
Lorne Bretz
Commissioner Deven Mitchell

Department of Revenue Staff Present:

Zach Hanna, Chief Investment Officer
Scott Jones, Head of Investment Operations,
Performance & Analytics
Hunter Romberg, Investment Data Analyst
Chris Madsen, Administrative Operations Manager

Pamela Leary, Director, Treasury Division
Ryan Kauzlarich, Assistant Comptroller
Michelle Prebula, Investment Officer
Grant Ficek, Business Analyst
Alysia Jones, Board Liaison

Department of Law Staff Present:

Ben Hofmeister, Assistant Attorney General

Department of Administration Staff Present:

Hans Zigmund, Deputy Commissioner
Amanda Pillifant, Executive Secretary

Department of Administration – Division of Retirement & Benefits Staff Present:

Ajay Desai, Director
Kevin Worley, Chief Financial Officer
Roberto Acevedo, Counseling & Education Manager

Jim Puckett, Chief Pension Officer
Traci Walther, Accountant

Investment Advisory Council Present:

Ruth Ryerson

Buck Staff Present:

David Kershner, Consulting Actuary
Tonya Manning, Chief Actuary

Stephen Oates, Health Actuary

GRS Staff Present:

Paul Wood, Actuary, Senior Consultant & Team Leader
Bill Detweiler, Consultant

Public Present:

Tom Klaameyer, NEA Alaska President

PROCEEDINGS

CALL TO ORDER

CHAIR HIPPLER called the Actuarial Committee of the ARM Board to order, and asked for a roll call.

MS. JONES called the roll.

PUBLIC METING NOTICE

CHAIR HIPPLER asked to confirm that the public meeting notice was met.

MS. JONES replied, yes, it had.

APPROVAL OF THE AGENDA

CHAIR HIPPLER asked for a motion to approve the agenda.

MOTION: A motion to approve the agenda was made by TRUSTEE RYAN; seconded by TRUSTEE BOB WILLIAMS.

There being no objection, the MOTION was APPROVED.

APPROVAL OF MINUTES

CHAIR HIPPLER moved to the minutes of June 15, 2022, and entertained a motion.

MOTION: A motion to accept the minutes of June 15, 2022, was made by TRUSTEE BOB WILLIAMS; seconded by TRUSTEE KROHN.

CHAIR HIPPLER asked for any corrections or amendments to the minutes, as presented.

There being no objection, the MOTION was APPROVED.

PUBLIC/MEMBER PARTICIPATION, COMMUNICATIONS AND APPEARANCES

CHAIR HIPPLER asked if there was any public/member participation at this time. He asked Ms. Jones if anyone indicated a desire to present.

MS. JONES replied no.

CHAIR HIPPLER moved to Discussion: Inflation Outlook and Projections with both Buck and GRS.

DISCUSSION: INFLATION OUTLOOK/PROJECTIONS

MR. KERSHNER began the presentation with the inflation projections. The economic-scenario-generating model used was GEMS which estimated future investment returns and inflation rates. The experience study was started in August, 2021, with the most recent capital market assumptions being the first quarter of 2021. The first quarter of 2022 was released, and the 30-year inflation rate is 2.58 based on those capital market assumptions. Last week, their financial risk management group released their second quarter 2022 capital market assumptions and now

the 30-year inflation rate projection is reflected to be 2.81. He added that these were the most up-to-date projections.

MR. DETWEILER gave a brief update on a couple of surveys that came out over the summer from different actuarial firms; one of them being GRS. He continued that 12 investment consultant firms are surveyed every year, and we get capital market assumptions, as well as inflation. He went through the average inflation assumption numbers from 2020 and 2021, and then averaged the long-term inflation among those firms. He added that Horizons, another actuarial firm, surveys 24 firms and they make those results public. Their numbers are similar to what was seen by GRS the past few years. Both of those surveys are generally based on first quarter, long-term inflation assumptions.

FY2024 CONTRIBUTION RATE SETTING

Discussion of FY2024 PER/TRS/JRS Additional State Contributions

MR. WORLEY stated Buck would be presenting the analysis for the FY24 rates. Based on prior discussions, a full normal cost, a zero normal cost, and something that falls at a 50-percent level for both PERS and TRS. He made the committee aware that they worked with the Department of Revenue to capture as much financial information for fiscal year '22 as possible to get the best rates that they could. That information was pulled as of August 26th. The financial statement draft was provided to Buck so they could be used in the calculation for the rate. He introduced his colleagues from Buck: David Kershner; Steve Oates; and Tonya Manning.

MR. KERSHNER reminded all that they had talked about the basic funding principle, the long-term principle of funding of every retirement system, and we have two sources of amounts coming out of the plan. Those would be benefits to participants and beneficiaries, and then expenses that are paid from the trust. He stated that all of the projections and setting of contribution rates for FY24 are based on 2021 valuations. The projections were liabilities based on those valuations, with no gains and losses. The projections were made in two scenarios: One had the FY22 asset return being 7.38; and the second is what the actual asset return was based on the actual assets. The difference between them was the impact of the adverse experience in FY22.

MR. HOFMEISTER explained the creation of SB 141 in 2006. One of the parts of that bargaining was the trusts were separated into a pension side and a healthcare side for both PERS and TRS.

MR. KERSHNER moved to the PERS and TRS side-by-side comparison, and discussed the projected liabilities based on the 2021 valuation. He talked about the healthcare column and stated that if zero percent Normal Costs were contributed in the years discussed, the PERS healthcare trust is projected to decrease from 186 percent to 172, and TRS from 217 to about 205. Even with the zero percent Normal Cost Contribution in all those years, with no liability surprises, the healthcare trusts are still projected to remain very well-funded.

MR. HOFFMEISTER stated that the conversation was very fruitful and was kind of missing from last year's discussion of contribution rates.

He recalled telling everyone that part of their jobs, their fiduciary responsibilities, and duties under the statutes, was to set appropriate contributions. In order to do that, they were told they needed to get experts to tell them what was an appropriate contribution rate. He continued that

this conversation went a long way in establishing the record of meeting the fiduciary responsibilities. He added that this conversation needed to happen every year, and that it is important to know for the next development in the future.

COMMISSIONER MITCHELL added that it was even more important on the pension side, which is the side that becomes overfunded.

CHAIR HIPPLER asked Buck for any final comments before the contribution review.

MR. OATES noted that a lot had changed that would impact the retired medical plan, and that created some uncertainty about liabilities. CHAIR HIPPLER noted that he had no objection to Mr. Oates moving ahead to legislative updates.

LEGISLATIVE CHANGES

MR. OATES stated that the Inflation Reduction Act was passed with a lot of changes around the Medicare Part D prescription drug program. He gave some background on Medicare Part D and explained the changes.

FY2024 CONTRIBUTION RATE SETTING

CHAIR HIPPLER thanked Buck and GRS for their comments and moved to the first action item, which is related to the FY2024 PERS employer contribution rate, with levels of Normal Cost described as three different options. He entertained a motion referencing which exhibit was being moved.

MOTION: A motion to move Resolution 2022-04 referencing Exhibit 2 was made by TRUSTEE BRETZ; seconded by TRUSTEE MIKE WILLIAMS.

TRUSTEE BRETZ clarified that Exhibit 2 was the zero percent for PERS for healthcare.

CHAIR HIPPLER asked for a roll-call vote.

After the roll-call vote, the MOTION was APPROVED. (Trustee Krohn, yes; Trustee Moen, yes; Trustee Ryan, no; Trustee Bob Williams, yes; Commissioner Mitchell, yes; Trustee Mike Williams, yes; Chair Hippler, yes.)

CHAIR HIPPLER stated that the Resolution 2022-04 passed and the next resolution entertained was Resolution 2022-05, which is with respect to the major medical insurance rate for the PERS Defined Contribution Retirement plan.

MOTION: A motion to approve Resolution 2022-5, as presented, was made by TRUSTEE MIKE WILLIAMS; seconded by TRUSTEE KROHN.

CHAIR HIPPLER asked for a clarification on the difference between Normal Cost versus the major medical insurance discussion and the occupation and disability discussion.

MR. KERSHNER explained that this applied to every plan, from pension plans to healthcare in the DB, the occupational death and disability, and retired medical and major medical in the DCR. He continued that there were two components to the contribution: the normal Cost, and the

funding of the unfunded liability. He walked through the 1 percent in this motion and where it would fall in the calculations.

TRUSTEE RYAN explained her concerns with the overall objection being about an unknown in the future.

CHAIR HIPPLER stated that the resolution on the floor was to set the retiree major medical insurance at 1.01 percent. He asked for a roll-call vote.

After the roll-call vote, the MOTION was APPROVED. (Trustee Moen, yes; Trustee Bretz, yes; Trustee Ryan, yes; Trustee Krohn, yes; Commissioner Mitchell, yes; Trustee Mike Williams, yes; Trustee Bob Williams, yes; Chair Hippler, yes.)

CHAIR HIPPLER stated that Resolution 2022-5 passed, and moved to Resolution 2022-06. This sets the employer contribution rate for public employees' defined contribution retirement plan, occupational death and disability benefit rates. He entertained a motion to adopt the resolution, as presented.

MOTION: A motion to approve Resolution 2022-06, as presented, was made by TRUSTEE MIKE WILLIAMS; seconded by TRUSTEE BRETZ.

After the roll-call vote, the MOTION was APPROVED. (Trustee Krohn, yes; Commissioner Mitchell, yes; Trustee Moen, yes; Trustee Ryan, yes; Trustee Mike Williams, yes; Trustee Bob Williams, yes; Trustee Bretz, yes; Chair Hippler, yes.)

CHAIR HIPPLER stated that Resolution 2022-06 passed and moved to action item 2022-07 which relates to the FY2024 TRS Employer Contribution Rate, with three different options for levels of normal cost. When making the motion, please indicate the exhibit being attached. He entertained a motion.

MOTION: A motion to approve Resolution 2022-07 with Exhibit 2 attached was made by TRUSTEE BRETZ; seconded by TRUSTEE MIKE WILLIAMS.

After the roll-call vote, the MOTION was APPROVED. (Trustee Bob Williams, yes; Trustee Bretz, yes; Trustee Krohn, yes; Commissioner Mitchell, yes; Trustee Moen, yes; Trustee Ryan, no; Trustee Mike Williams, yes; Chair Hippler, yes.)

CHAIR HIPPLER stated that Resolution 2022-07 passed with Exhibit 2, and moved to Resolution 2022-08, which sets the teachers' defined contribution retirement plan, retiree major medical insurance rate. He asked for a motion to adopt the resolution, as presented.

MOTION: A motion to approve Resolution 2022-08, as presented, was made by TRUSTEE MIKE WILLIAMS; seconded by TRUSTEE BOB WILLIAMS.

TRUSTEE MIKE WILLIAMS noted that these recommendations would go to the Full Board, and the Full Board would be adopting separately at the meeting.

After the roll-call vote, the MOTION was APPROVED. (Trustee Krohn, yes; Trustee Bretz, yes; Commissioner Mitchell, yes; Trustee Ryan, yes; Trustee Moen, yes; Trustee Mike Williams, yes; Trustee Bob Williams, yes; Chair Hippler, yes.)

CHAIR HIPPLER moved to Resolution 2022-09, relating to the teachers' defined contribution retirement plan, occupational death & disability benefit rate. He asked for a motion to recommend adoption, as presented.

MOTION: A motion to approve Resolution 2022-09, as presented, was made by TRUSTEE BOB WILLIAMS; seconded by TRUSTEE KROHN.

After the roll-call vote, the MOTION was APPROVED. (Trustee Bretz, yes; Commissioner Mitchell, yes; Trustee Ryan, yes; Trustee Moen, yes; Trustee Bob Williams, yes; Trustee Mike Williams, yes; Trustee Krohn, yes; Chair Hippler, yes.)

CHAIR HIPPLER stated that Resolution 2022-09 passed, and moved to the adoption of Resolution 2022-10, relating to the FY2024 contribution amount for NGNMRS. He entertained a motion.

MOTION: A motion to approve Resolution 2022-10, as presented, was made by TRUSTEE BOB WILLIAMS; seconded by TRUSTEE MIKE WILLIAMS.

CHAIR HIPPLER asked for discussion on Resolution 2022-10. This plan is smaller and also overfunded. He asked Mr. Kershner to walk through this resolution and what it would do as far as Normal Cost.

MR. KERSHNER stated that the National Guard plan is smaller and overfunded. One of the reasons was that back in 2018 there was some data cleanup that the National Guard group did. He explained that there were several hundred that were paid out in a lump sum when terminated or retired. The data was still being received as if they were still in the plan with a future liability. The assets reflected the payout amount which was corrected in the 2018 valuation, which caused the overfunding.

CHAIR HIPPLER stated that no money was being put into this plan in this resolution. He asked for a roll-call vote.

After the roll-call vote, the MOTION was APPROVED. (Trustee Mike Williams, yes; Trustee Bob Williams, yes; Trustee Bretz, yes; Trustee Krohn, yes; Commissioner Mitchell, yes; Trustee Moen, yes; Trustee Ryan, yes; Chair Hippler, yes.)

CHAIR HIPPLER stated that the motion passed, as presented. He moved to the information item for the JRS Employer Contribution Rate.

JRS CONTRIBUTION

MR. KERSHNER stated that the State contribution rate for the judges' plan, JRS, is the past service rate only, then, the employer, the Court, pays the Normal Cost. The JRS healthcare trust is similarly overfunded and is strictly the mortgage payment toward the pension unfunded liability.

MR. WORLEY clarified that this was an information item showing what was going into the 2024 budget. The Board does not adopt the rate for JRS.

CHANGES to ACTUARIAL STANDARDS of PRACTICE

MS. MANNING stated that this was information only. Although it would be something that would come into effect for their plan, the timing is delayed. She gave some background and talked about how it related to Actuarial Standards of Practice No. 4. That was the fundamental standard of how pension valuations are done, and it talks about how the liabilities are calculated and allocated for an approved liability.

VALUATION TIMELINE FOR FY22

CHAIR HIPPLER recognized Mr. Worley.

MR. WORLEY thanked the crew for all their work and handling lots of changes to the presentation in a very short time. He asked Mr. Kershner to continue.

MR. KERSHNER stated that this was an information item and discussed the timeline for the upcoming valuation cycle that just started for the 6/30/22 valuations. He continued that they were working toward delivery of preliminary valuation results at the December meeting. They were on track, as shown on the timeline.. He added that they will discuss the valuation timeline at each quarterly meeting to provide a status of where they are toward the ultimate adoption of the 2022 valuation reports in June 2023.

MR. DETWEILER stated that GRS is comfortable with this timeline as far as their prior review and will be requesting test lives this week. The focus this year would be on the assumptions that are adopted by the Board and making sure those are applied appropriately.

ONLINE ACTUARIAL DASHBOARDS

MR. KERSHNER stated that this was something that all of the trustees and several DRB and Treasury staff members have access to with the Buck ID log-in information. The URL address had been provided, and he gave a refresher on what the dashboards provide. He moved to the historical objective, which gave more detail, with some projections included.

FUTURE MEETINGS

CHAIR HIPPLER reviewed the calendar and stated that the next meeting would be November 30th. He asked for any public or member comments. Hearing none, he asked for a motion to adjourn.

MOTION: A motion to adjourn the meeting was made by TRUSTEE BOB WILLIAMS; seconded by TRUSTEE KROHN.

There being no objection, the MOTION was APPROVED.

(Actuarial Committee adjourned at 3:54 p.m.)



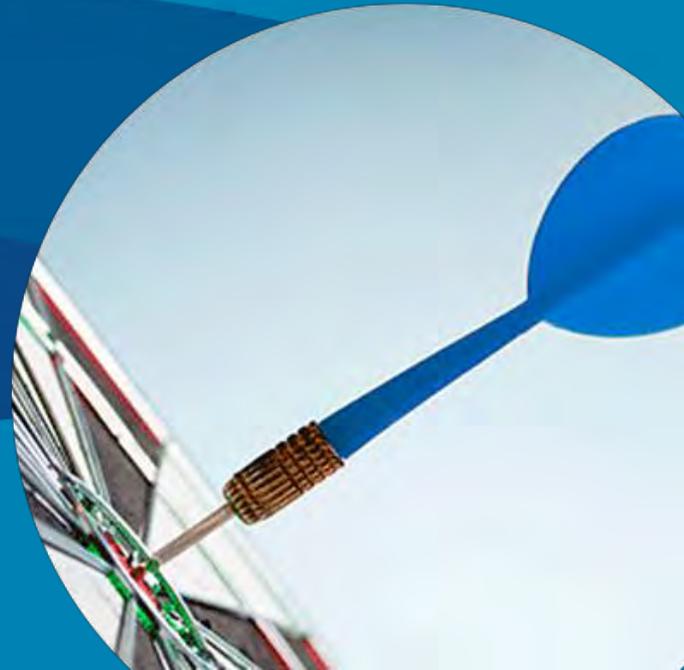
Alaska Retirement Management Board

Medical Retiree Funding

Paul Wood, ASA, FCA, MAAA

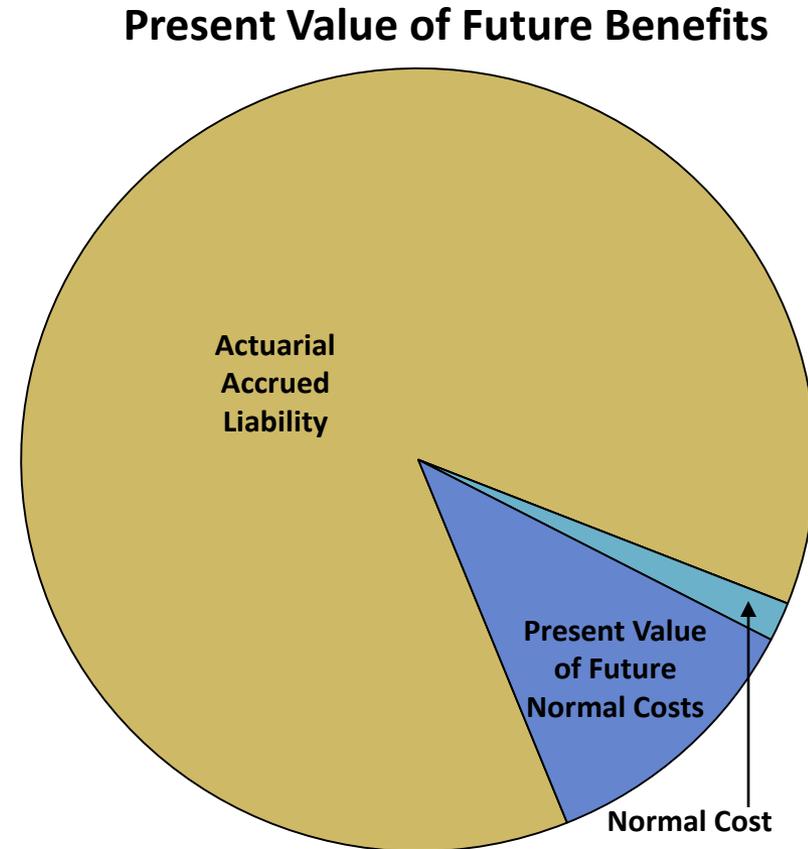
Bill Detweiler, ASA, EA, FCA, MAAA

November 30, 2022



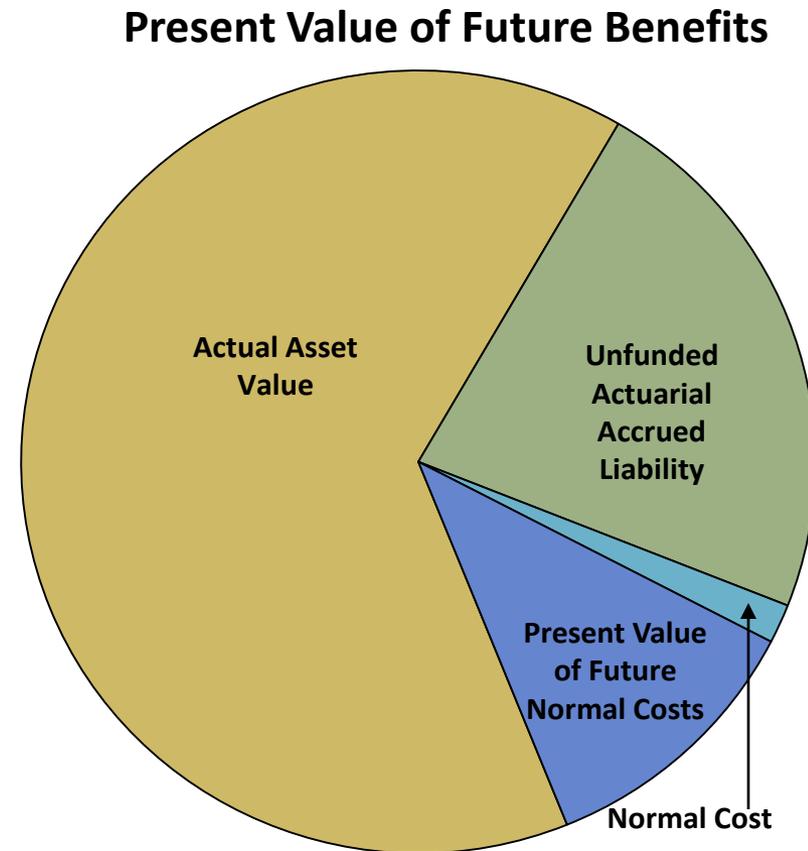
Actuarial Funding

- **Present Value of Future Benefits (PVB)** – present value of all estimated future benefits payable to current participants (active, retired, terminated vested)
- **Actuarial Accrued Liability (AAL)** – portion of PVB allocated to prior years, also represents the *target value of assets* at a specific point in time based on the funding objectives
- **Normal Cost** – portion of PVB allocated to current year, also represents cost of accruing next year's benefit
- **Present Value of Future Normal Costs** – portion of PVB allocated to future years



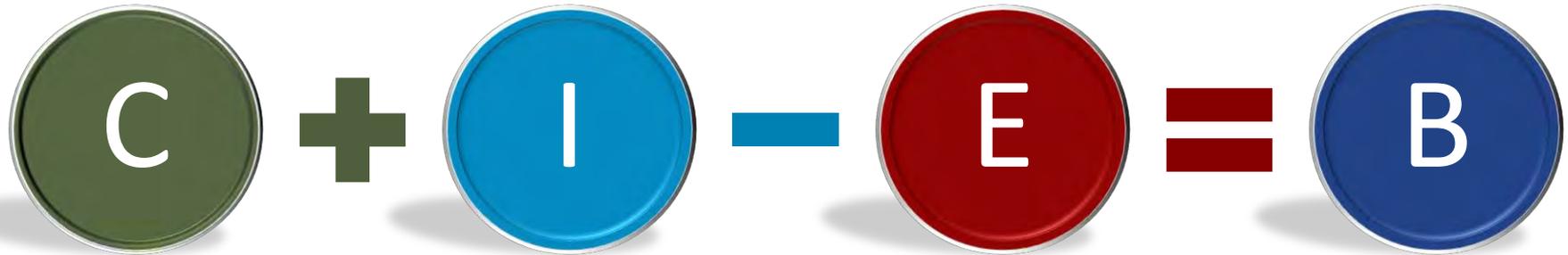
Actuarial Funding

- **Unfunded Actuarial Accrued Liability (UAAL)** – shortfall between actuarial accrued liability (or *target value of assets*) and the actual value of assets at a specific point in time
- **Funded Ratio** – the actual asset value as a percentage of the *target asset value*



Actuarial Funding

Basic Retirement Funding Equation



Contributions

- Funding Policy



Investment Income

- Investment Strategy



Expenses

- Administrative Policy



Benefits

- Plan Design



“Money In = Money Out”

Current Retiree Medical Funded Ratios*

	PERS	TRS	Combined
Actuarial Accrued Liability	\$6.9	\$2.5	\$9.4
Present Value of Future Benefits	\$7.2	\$2.6	\$9.8
Market Value of Assets	\$8.9	\$3.4	\$12.3
Funded Ratio – AAL	129%	135%	130%
Funded Ratio - PVB	123%	130%	125%

*estimated by GRS as of June 30, 2022 using projections provided by Buck

- Both plans currently have enough money (and more) to pay all future benefits, *assuming all actuarial assumptions are met*
 - What if actuarial assumptions are not met?
 - How much ‘reserve’ should be kept for any adverse deviation from assumptions?
 - Depends on risk tolerance

Developing Risk Tolerance Framework

- A couple of notes before we get started
 - Buck provided the baseline deterministic projections that we were able to use to perform the analysis on the following slides
 - For purposes of this presentation and simplicity, we have combined PERS and TRS results
 - The risk framework could be reviewed separately, especially if the plans begin to diverge
 - In the projection analysis, we have capped the projected funded status at 300%
 - Our projections are intended to model potential outcomes and by no means guarantee any result
 - Furthermore, this analysis is not intended to be an exhaustive analysis of risk

Developing Risk Tolerance Framework

- Intuitively, the better funded the plan, the lower the likelihood of significant future contributions
- Deterministic projections indicate that the funded ratio for the two retiree medical plans will grow rapidly
- Deterministic projections that show only one outcome do not always tell the entire story
- There is no one single expected outcome, rather, there is a range of expected outcomes with various likelihoods
- Stochastic projections can help demonstrate the likelihood of certain outcomes

Developing Risk Tolerance Framework

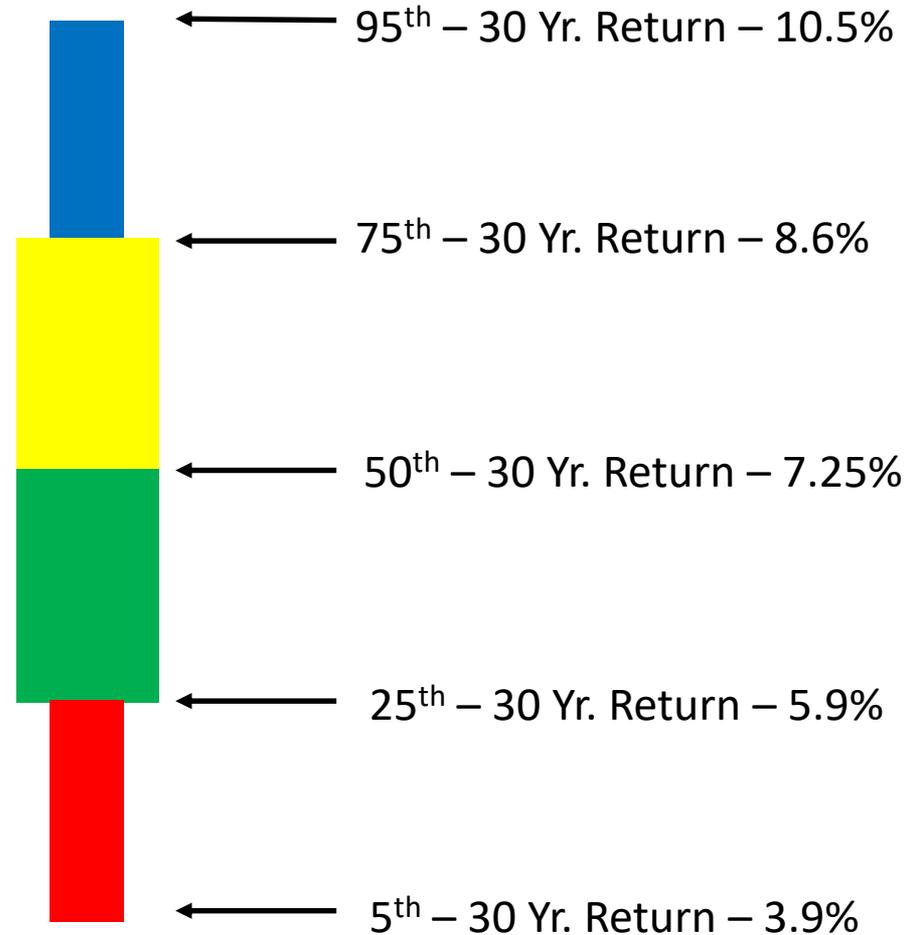
- To develop these projections, we pick an input and vary it using an expected value and a standard deviation
- Thousands of trials are run and then ranked to develop a range of outcomes
- In this case, we are focusing on the largest risk facing the plans, that is, investment return risk
- We can call this the “Cone Of Uncertainty”

Developing Risk Tolerance Framework

Cone of Uncertainty - Stochastic Projections

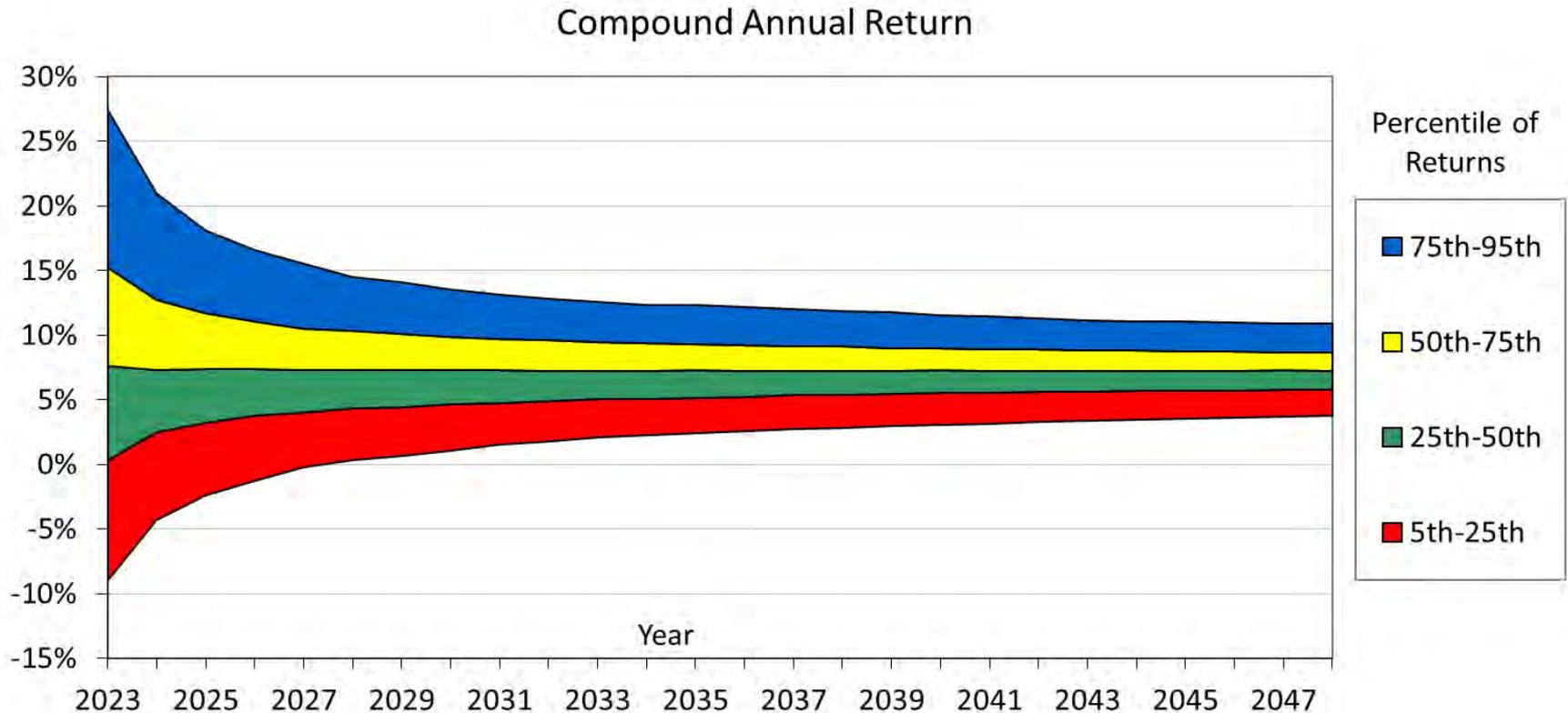
- Interpreting stochastic results

- 95th percentile
 - Exceeds 95% of all forecasts
 - Overly optimistic outcome
- 75th percentile
 - Exceeds 75% of all forecasts
 - Optimistic outcome
- 50th percentile
 - Exceeds 50% of all forecasts
 - Median outcome
- 25th percentile
 - Exceeds 25% of all forecasts
 - Pessimistic outcome
- 5th percentile
 - Exceeds 5% of all forecasts
 - Overly pessimistic outcome



Developing Risk Tolerance Framework

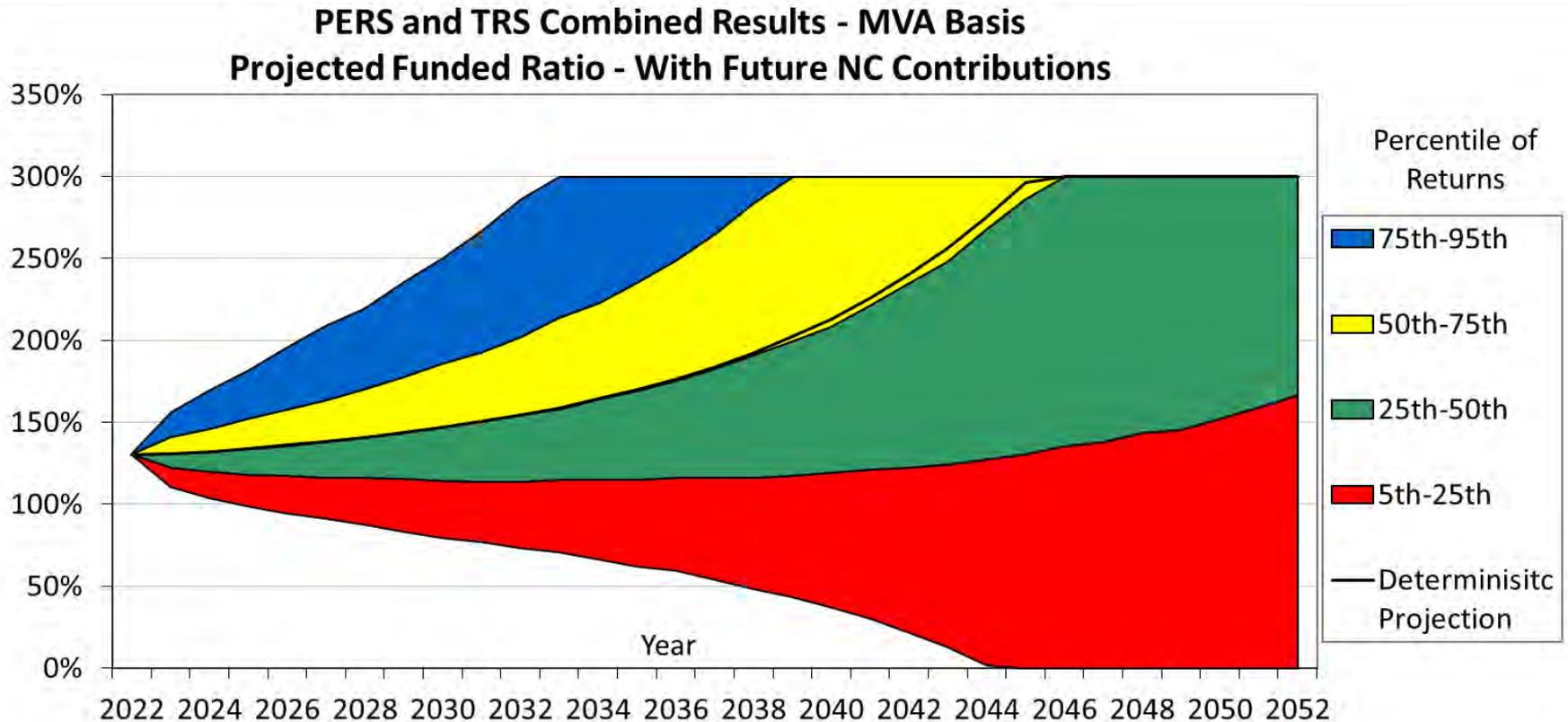
Cone of Uncertainty - Annual Compound Rates of Return



- Based on 7.25% median expected return with 11% standard deviation

Developing Risk Tolerance Framework

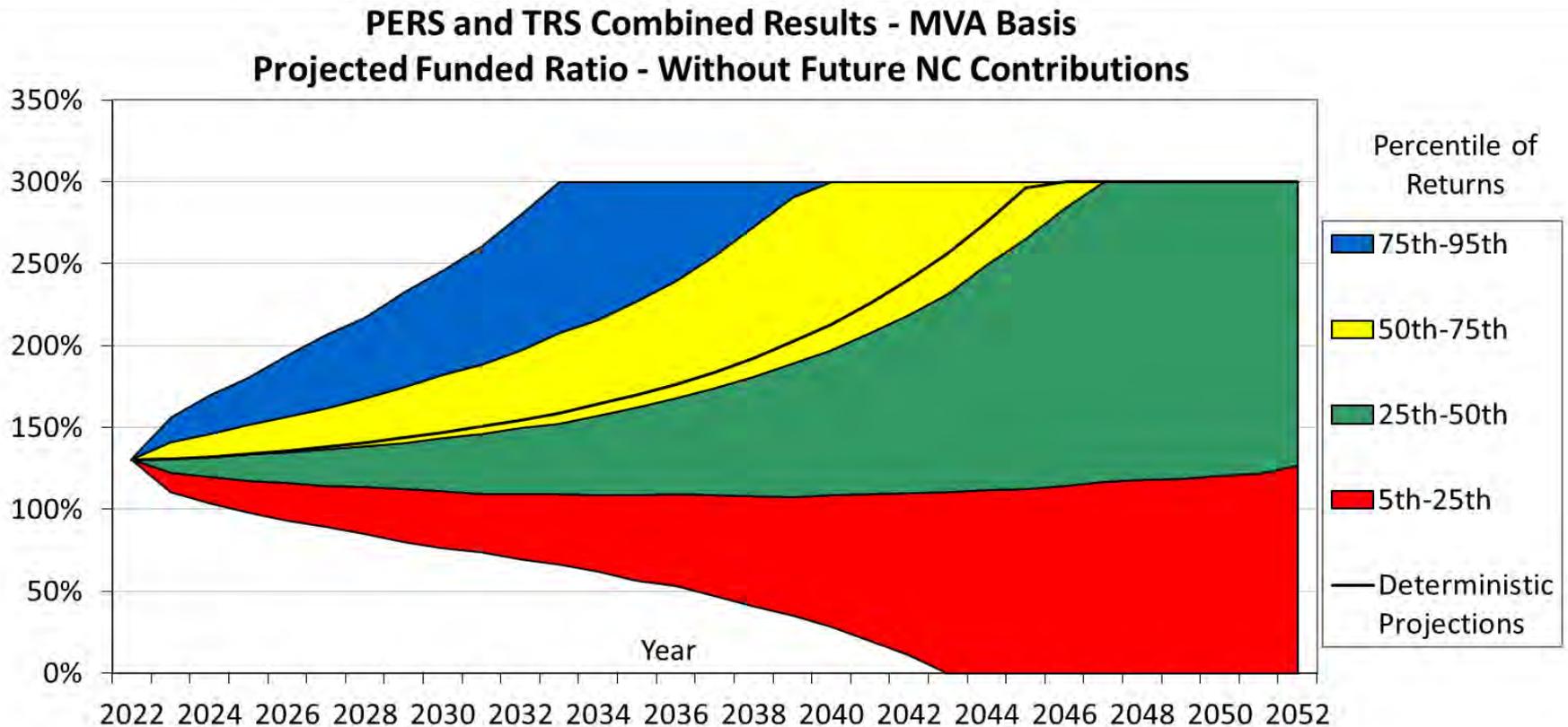
Cone of Uncertainty – Projected Funded Ratio – Baseline w/ Cont.



- At the current funded levels (130%) with future normal cost contributions, there is a greater than 75% chance that the funded status stays above 150%

Developing Risk Tolerance Framework

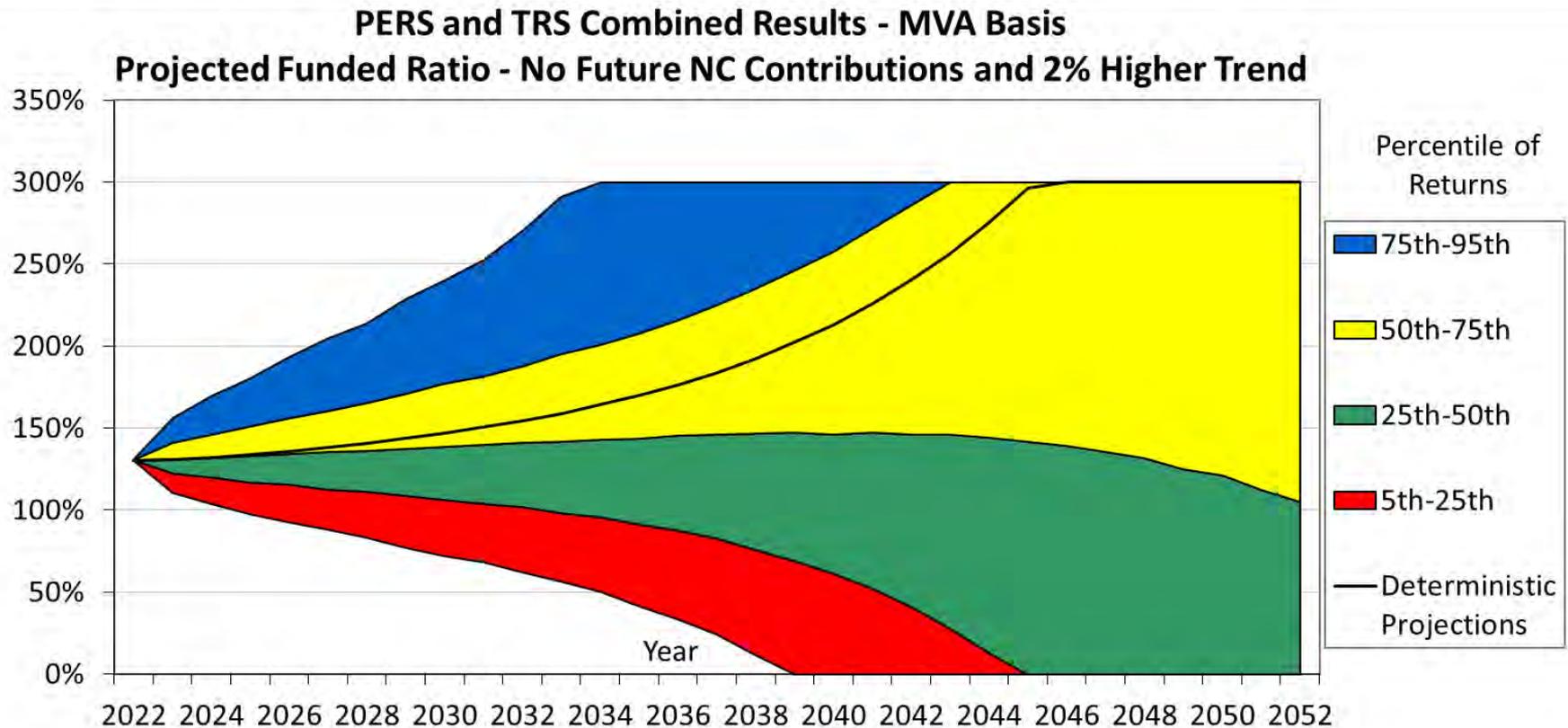
Cone of Uncertainty – Projected Funded Ratio – Baseline w/o Cont.



- At the current funded levels (130%) without future normal cost contributions, there is a greater than 75% chance that the funded status stays above 100%

Developing Risk Tolerance Framework

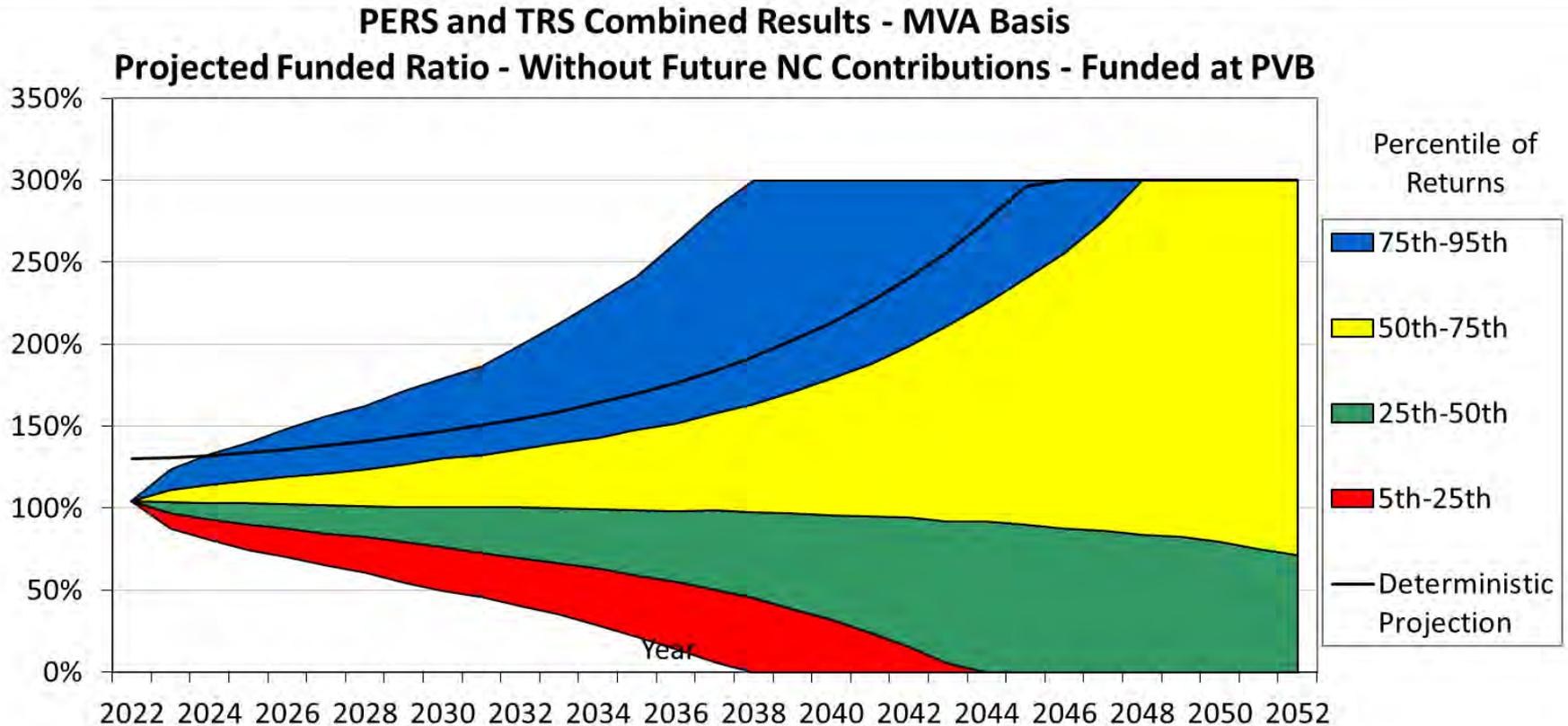
Cone of Uncertainty – Projected Funded Ratio – Sustained High Trend



- If there were sustained higher healthcare trend, then the likelihood of the funded ratio dropping below 100% is around 50%

Developing Risk Tolerance Framework

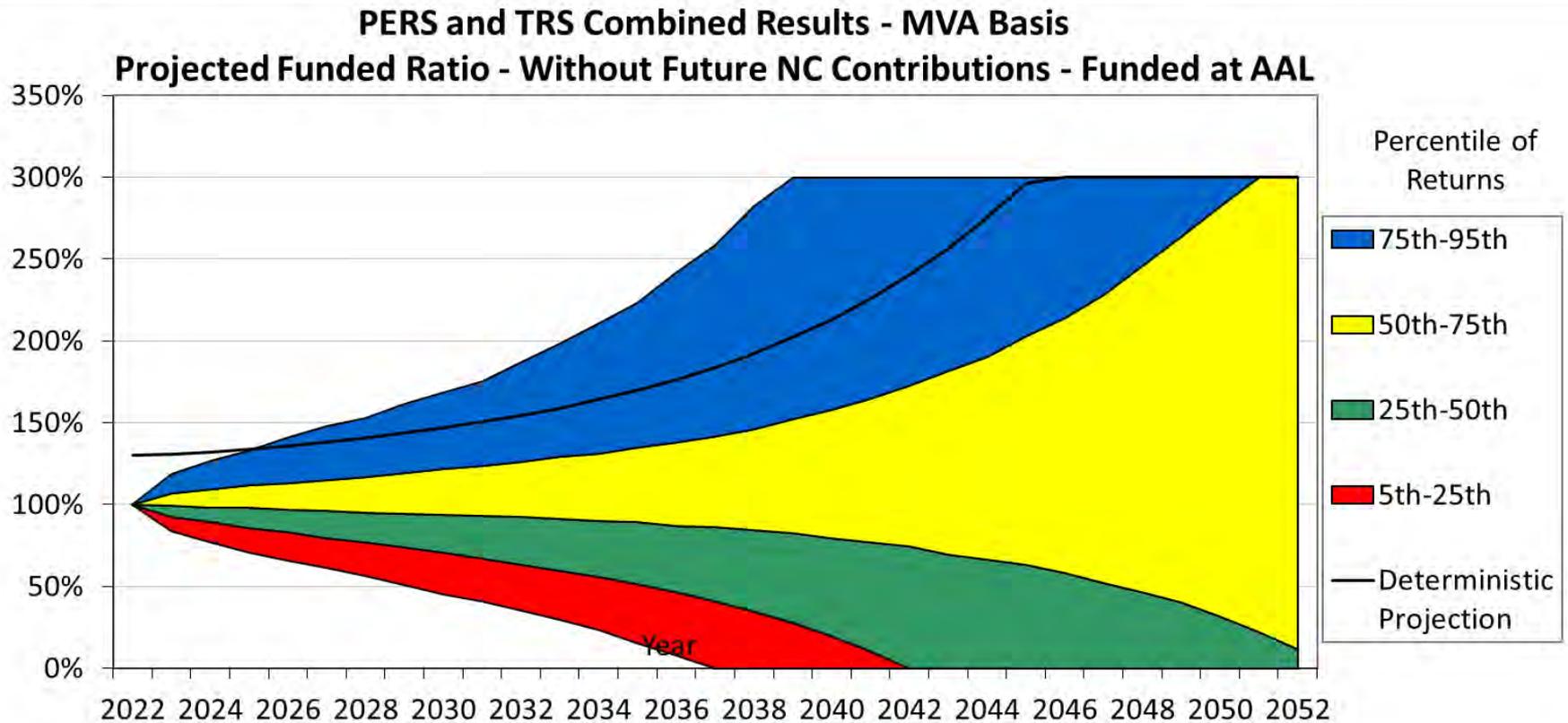
Cone of Uncertainty – Projected Funded Ratio – Funded at PVB



- If the plans were funded at the PVB (104%) without future normal cost contributions, there is a less than 50% chance that the funded status stays above 100%

Developing Risk Tolerance Framework

Cone of Uncertainty – Projected Funded Ratio – Funded at AAL



- If the plans were funded at the AAL (100%) without future normal cost contributions, there is around a 60% chance that the funded status falls below 100%

Developing Risk Tolerance Framework

How can we use all this data?

- We can construct a table that summarizes the outcomes by scenario
 - Median funded ratio after 10 years
 - Median funded ratio after 20 years
 - Median funded ratio after 30 years
 - Likelihood of the funded status falling below 100% after 10 years
 - Likelihood of the funded status falling below 100% after 20 years
 - Likelihood of the funded status falling below 100% after 30 years

Developing Risk Tolerance Framework

How can we use all this data?

Scenario Descriptions			Median Funded Ratio			Likelihood of the Funded Status < 100%		
Funded Ratio at Starting Point	Contributions	Healthcare Trend	After 10 Years	After 20 Years	After 30 Years	After 10 Years	After 20 Years	After 30 Years
Current Funding (130%)	With Future NC Contributions	Baseline	155%	235%	300%	17%	20%	21%
Current Funding (130%)	Without Future NC Contributions	Baseline	150%	219%	300%	19%	23%	23%
Current Funding (130%)	Without Future NC Contributions	High	141%	146%	105%	24%	39%	50%
Funded at PVB (104%)	Without Future NC Contributions	Baseline	100%	94%	72%	50%	52%	53%
Funded at AAL (100%)	Without Future NC Contributions	Baseline	93%	76%	17%	56%	58%	59%

Funded ratio capped at 300% for display purposes

- As shown, as the starting point funded ratio decreases, the higher the likelihood of the projected funded status dropping below 100%
- Given the current funding of the two plans, absent significant periods of high sustained healthcare trend, there is a greater than 75% likelihood contributions will not be necessary

Where To Go From Here?

- Possible strategies to move forward
 - Develop a risk tolerance matrix to determine whether or not contributions should be made to the healthcare trusts
 - Pursue a legislative solution, i.e., adjust the funding policy to allow for future normal cost contributions to be diverted to the pension trusts
 - De-risk the healthcare trusts
 - Results in a lower funded ratio initially but less asset volatility going forward
 - Other?

Questions?





State of Alaska Retirement Systems

Presentation to ARMB Actuarial Committee

- Inflation Projections

November 30, 2022

Inflation Projections

- Buck’s capital market assumptions are based on an economic scenario generating model developed by Conning and Company called GEMS[®]
- The table below shows the GEMS geometric inflation projections based on updated capital market assumptions (2022 Q1-Q3) and the capital market assumptions that were used in the recent experience study (2021 Q1)

Time Horizon	2022 Q3	2022 Q2	2022 Q1	2021 Q1
5 years	5.16%	5.32%	4.61%	1.73%
10 years	4.03%	4.06%	3.57%	1.85%
15 years	3.51%	3.50%	3.13%	1.98%
20 years	3.20%	3.16%	2.86%	2.03%
25 years	3.00%	2.95%	2.69%	2.05%
30 years	2.87%	2.81%	2.58%	2.08%





State of Alaska Retirement Systems

Presentation to ARMB Actuarial Committee

- Preliminary June 30, 2022 Valuations Results (PERS/TRS)

November 30, 2022

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Purpose of the 2022 Valuations

Purpose of the 2022 Valuations

- Measure each plan's funded status as of June 30, 2022
- Compare actual FY22 experience (assets and liabilities) to expected experience based on the assumptions used in the 2021 valuations
- Calculate the effects of the new assumptions adopted by the ARMB in June 2022 based on the 2021 experience study
- Provide the basis for FY25 contribution rates to be adopted by the ARMB in September 2023

2022 Valuation Highlights

General Observations

- Assets underperformed relative to expectations in FY22
- Pension liabilities are higher than expected primarily due to Postretirement Pension Adjustments (PRPAs) and salary increases
- Healthcare liabilities are lower than expected primarily due to favorable claims experience
- New assumptions had a relatively small impact on the liabilities
- No significant changes in pension funded ratios vs last year, healthcare funded ratios increased
- Employer/State contribution rates are higher than last year for pension, and lower than last year for healthcare

FY22 Asset Experience – PERS

(\$000's)

Market Value

PERS - Pension			
6/30/21	6/30/22	FY22	6/30/22
actual	expected	gain/(loss)	actual
A	B	C	D = B + C
11,912,309	12,386,201	(1,570,061)	10,816,140

PERS - Healthcare			
6/30/21	6/30/22	FY22	6/30/22
actual	expected	gain/(loss)	actual
A	B	C	D = B + C
9,784,141	10,157,569	(1,288,435)	8,869,134

Actuarial Value

PERS - Pension			
6/30/21	6/30/22	FY22	6/30/22
actual	expected	gain/(loss)	actual
A	B	C	D = B + C
10,466,709	10,833,916	127,582	10,961,498

PERS - Healthcare			
6/30/21	6/30/22	FY22	6/30/22
actual	expected	gain/(loss)	actual
A	B	C	D = B + C
8,581,155	8,865,802	114,141	8,979,943

FY22 estimated returns:

- Market = (6.0)%
- Actuarial = 8.7%

Note: In deriving our estimated returns, we make a simplifying assumption that cash flows are uniformly distributed throughout the year. The DOR's FY22 market return may differ from our estimate due to a more refined approach.

FY22 Asset Experience – TRS

(\$000's)

Market Value

TRS - Pension			
6/30/21	6/30/22	FY22	6/30/22
actual	expected	gain/(loss)	actual
A	B	C	D = B + C
6,731,481	6,907,591	(880,940)	6,026,651

TRS - Healthcare			
6/30/21	6/30/22	FY22	6/30/22
actual	expected	gain/(loss)	actual
A	B	C	D = B + C
3,723,031	3,884,064	(491,853)	3,392,211

Actuarial Value

TRS - Pension			
6/30/21	6/30/22	FY22	6/30/22
actual	expected	gain/(loss)	actual
A	B	C	D = B + C
5,910,369	6,025,881	74,323	6,100,204

TRS - Healthcare			
6/30/21	6/30/22	FY22	6/30/22
actual	expected	gain/(loss)	actual
A	B	C	D = B + C
3,267,737	3,395,169	42,047	3,437,216

FY22 estimated returns:

- Market = (6.0)%
- Actuarial = 8.7%

Note: In deriving our estimated returns, we make a simplifying assumption that cash flows are uniformly distributed throughout the year. The DOR's FY22 market return may differ from our estimate due to a more refined approach.

FY22 Liability Experience

(\$000's)

PERS

PERS - Pension				
6/30/21 actual	6/30/22 expected	FY22 gain/(loss)	assumption changes	6/30/22 actual
A	B	C	D	E = B - C + D
15,419,975	15,685,956	(201,832)	205,891	16,093,679

PERS - Healthcare				
6/30/21 actual	6/30/22 expected	FY22 gain/(loss)	assumption changes	6/30/22 actual
A	B	C	D	E = B - C + D
6,856,170	7,024,712	279,251	(88,392)	6,657,069

TRS

TRS - Pension				
6/30/21 actual	6/30/22 expected	FY22 gain/(loss)	assumption changes	6/30/22 actual
A	B	C	D	E = B - C + D
7,471,887	7,539,454	(120,559)	144,033	7,804,046

TRS - Healthcare				
6/30/21 actual	6/30/22 expected	FY22 gain/(loss)	assumption changes	6/30/22 actual
A	B	C	D	E = B - C + D
2,439,603	2,507,373	85,338	20,542	2,442,577

Key Reasons for Liability Gains/(Losses) During FY22 – PERS

(\$000's)

	Pension	Healthcare
PRPA increases due to 2021 CPI > expected	(162,028)	n/a
Salary increases > expected	(50,545)	n/a
Demographic experience	8,059	(417)
Claims experience	n/a	251,976
Changes in dependent coverage elections	n/a	17,064
Medicare Part B only experience	n/a	5,064
Other	<u>2,682</u>	<u>5,564</u>
Total - \$	(201,832)	279,251
Total - %	(1.3)%	4.1%

Key Reasons for Liability Gains/(Losses) During FY22 – TRS

(\$000's)

	Pension	Healthcare
PRPA increases due to 2021 CPI > expected	(85,465)	n/a
Salary increases > expected	(30,870)	n/a
Demographic experience	(7,166)	(13,268)
Claims experience	n/a	94,487
Changes in dependent coverage elections	n/a	1,071
Medicare Part B only experience	n/a	1,235
Other	<u>2,942</u>	<u>1,813</u>
Total - \$	(120,559)	85,338
Total - %	(1.5)%	3.5%

FY22 Claims Experience Gains

- Key reasons for the \$252M (PERS) and \$94M (TRS) per capita claims cost gains:
 - Medical costs are lower than projected (7% lower for Pre-Medicare / 5% lower for Medicare)
 - EGWP subsidy provided by Segal increased by 16% from \$1,131 for 2022 to \$1,309 for 2023

Fiscal 2023 Valuation age 65 per capita cost	Medical			Prescription Drugs (Rx)		
	Pre-Medicare	Medicare Parts A & B	Medicare Part B Only	Pre-Medicare	Medicare	EGWP (Subsidy)
- Expected	16,929	1,706	5,629	3,615	3,721	(1,211)
- Actual	15,706	1,625	5,363	3,712	3,907	(1,309)
- Dollar (Gain) / Loss	(1,223)	(81)	(266)	97	186	(98)
- Percentage (Gain) / Loss	(7.2%)	(4.7%)	(4.7%)	2.7%	5.0%	(8.1%)

Individual Retiree Cost at Age 65 Actual vs Expected

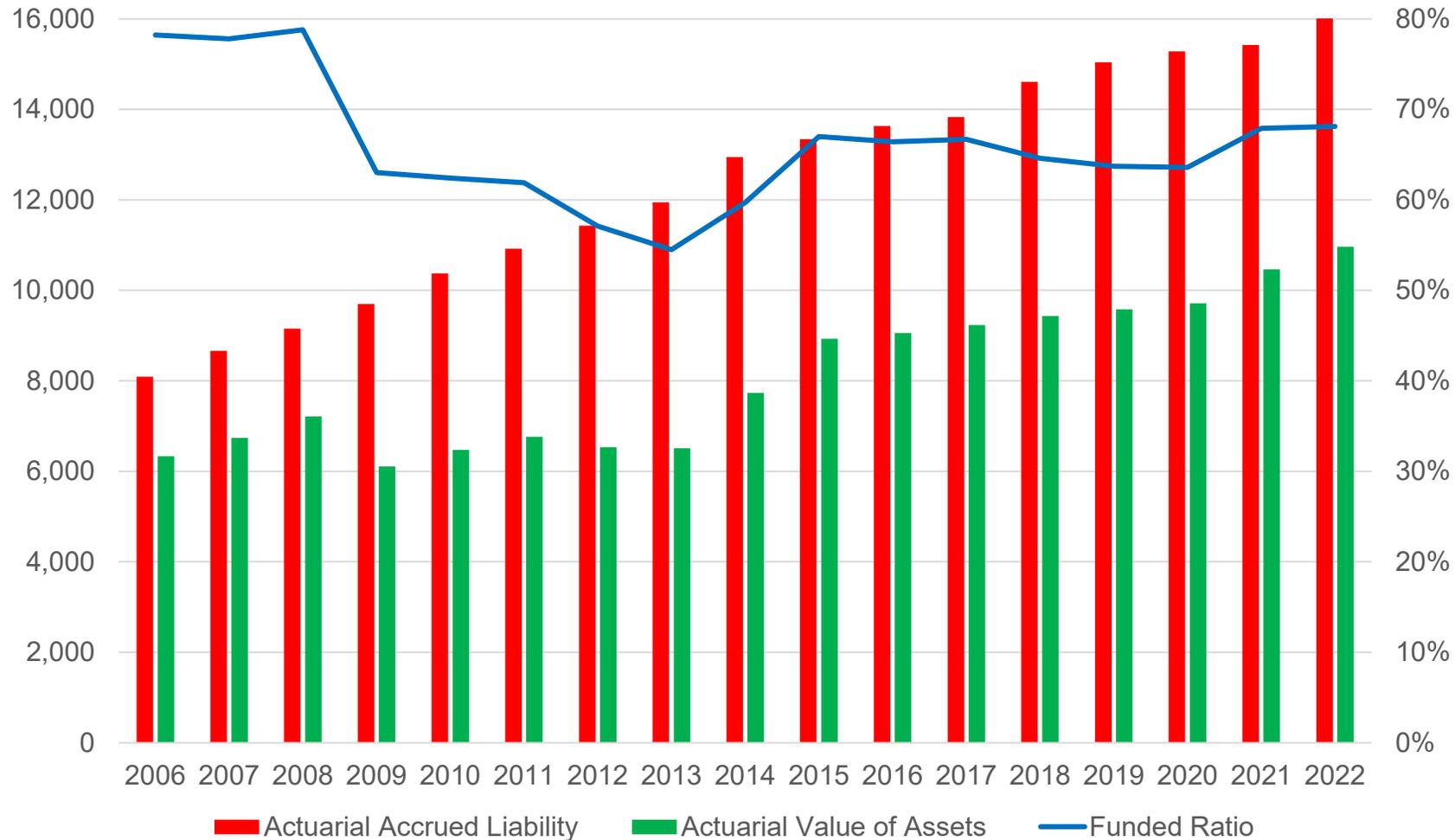
Medical, Rx and EGWP Combined
Medicare Member with A&B



Pre-65 = Pre-Medicare Medical + Rx
Post-65 = Medicare A&B + Rx + EGWP

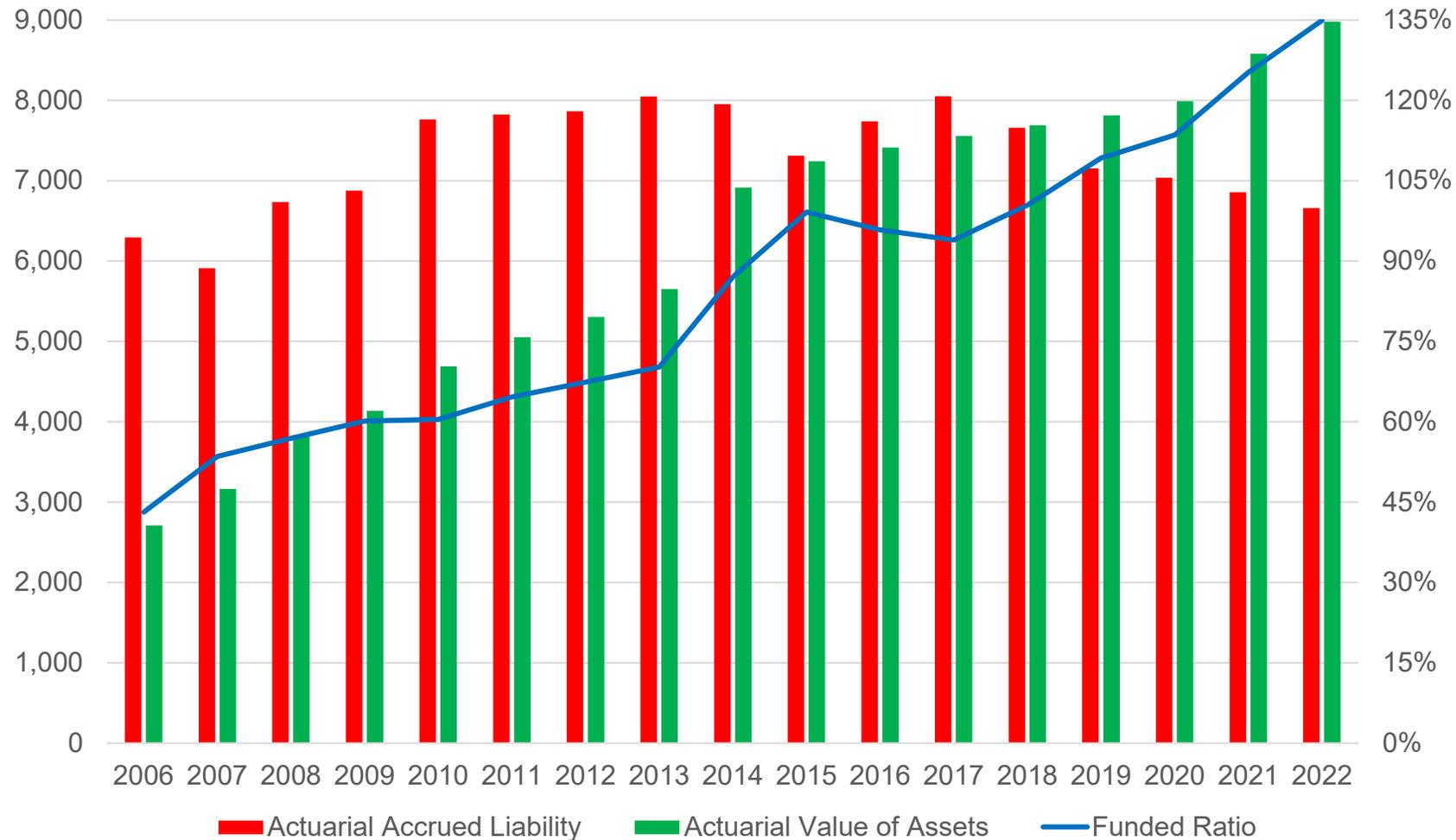
Historical Figures (2006-2022)

Assets, Liabilities and Funded Ratio – PERS Pension (\$millions)



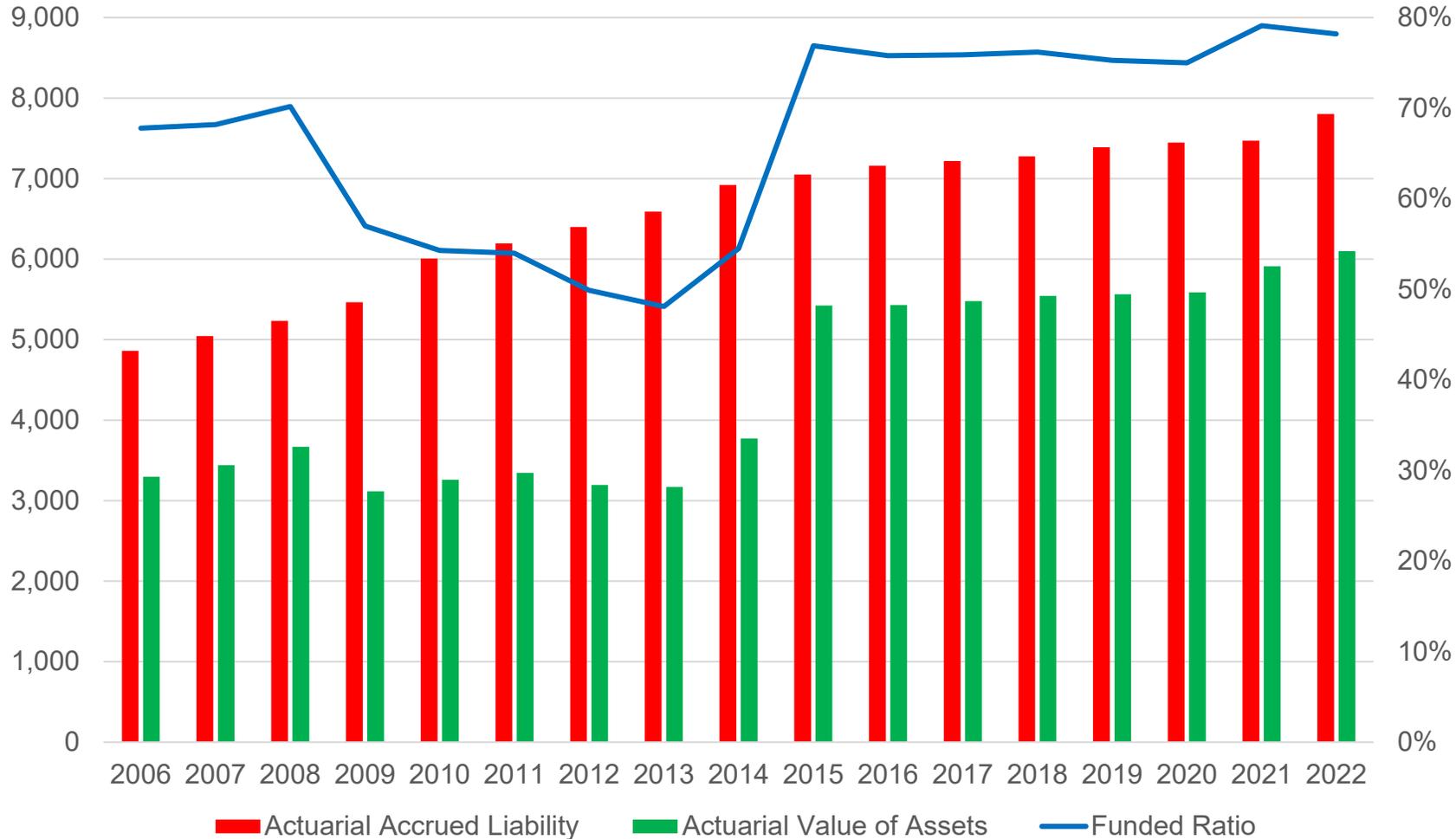
2006 Funded Ratio: 78.2%
2022 Funded Ratio: 68.1%

Assets, Liabilities and Funded Ratio – PERS Healthcare (\$millions)



2006 Funded Ratio: 43.1%
2022 Funded Ratio: 134.9%

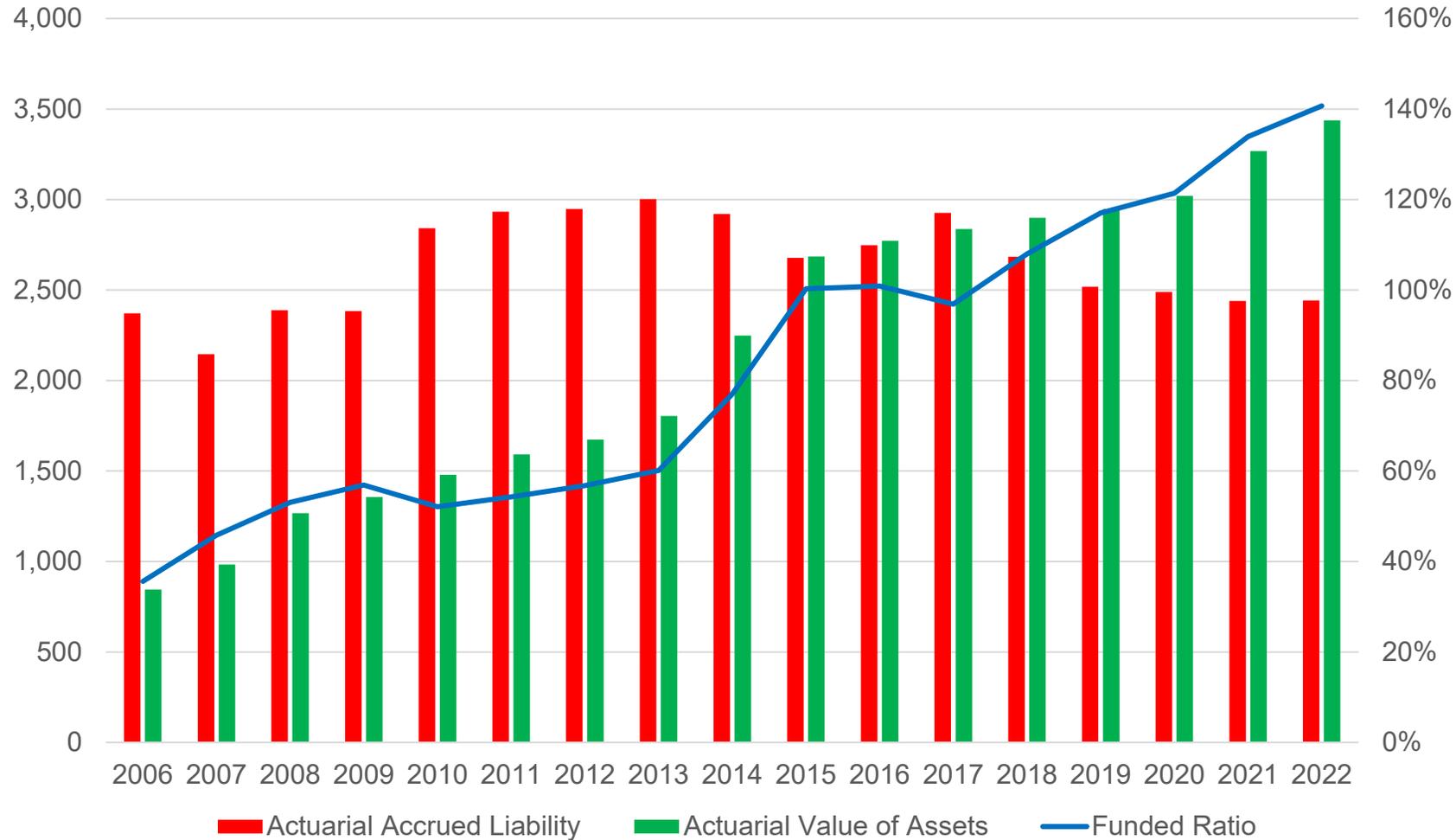
Assets, Liabilities and Funded Ratio – TRS Pension (\$millions)



2006 Funded Ratio: 67.8%
2022 Funded Ratio: 78.2%

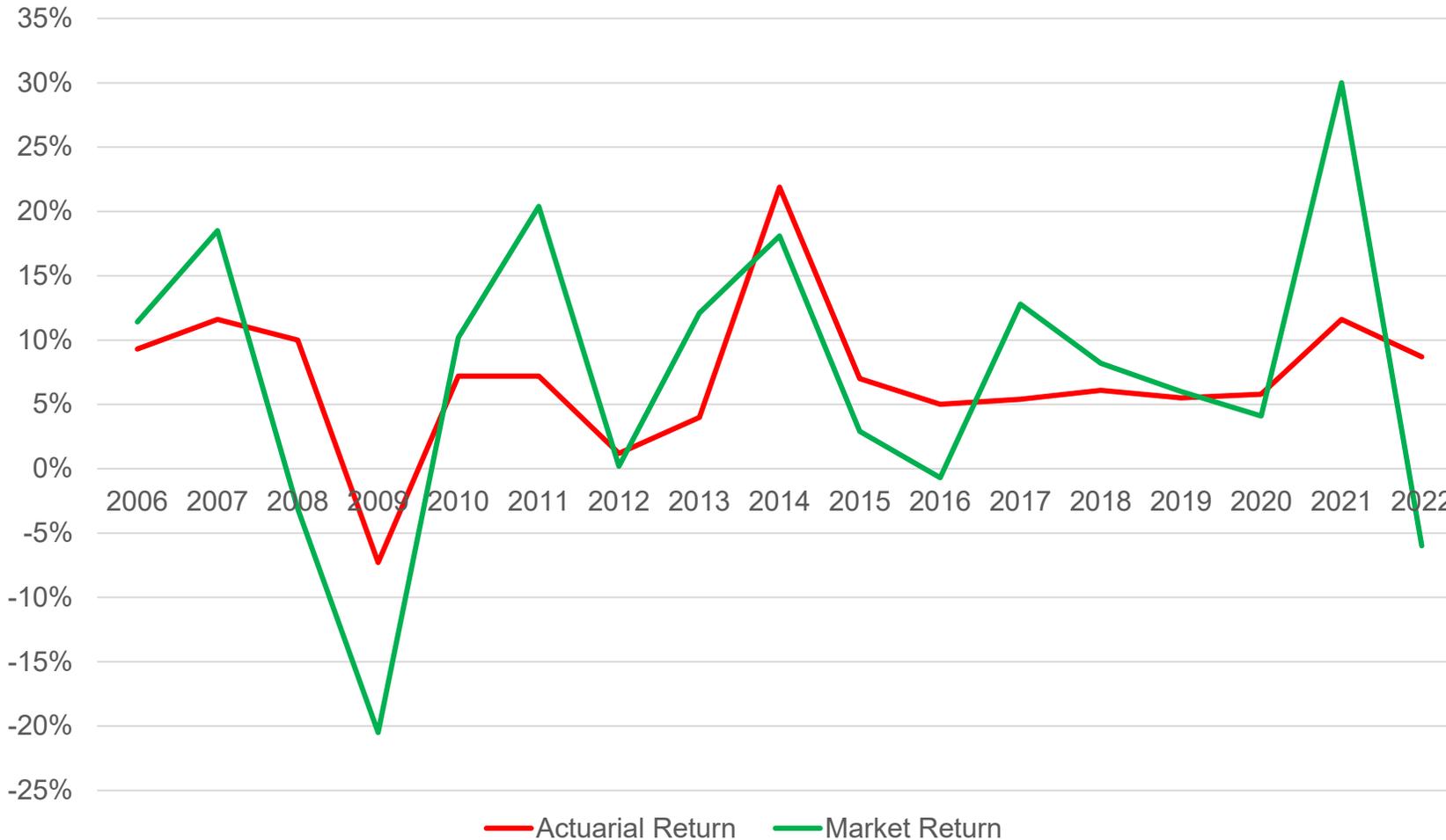
Assets, Liabilities and Funded Ratio – TRS Healthcare

(\$millions)



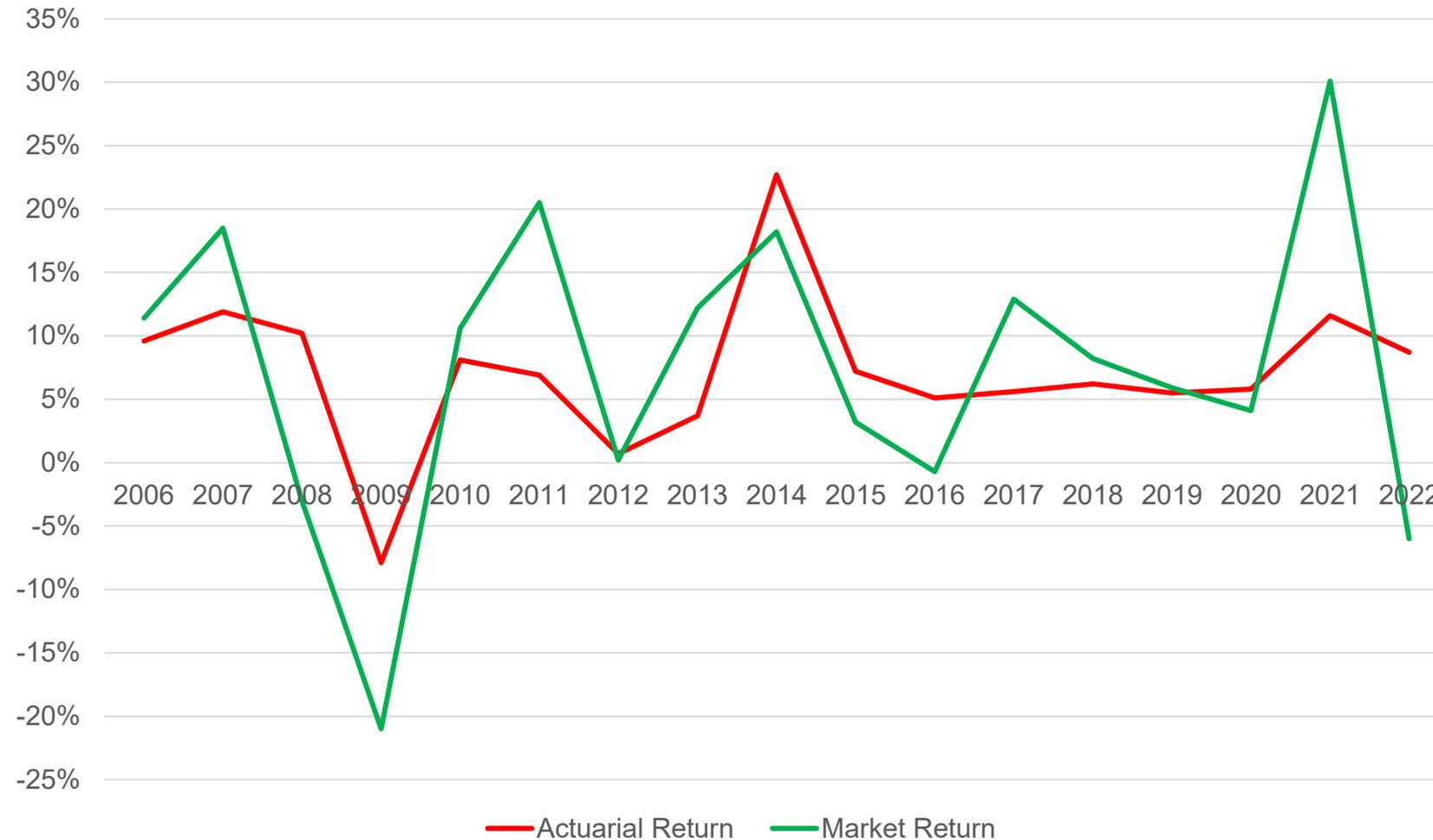
2006 Funded Ratio: 35.6%
 2022 Funded Ratio: 140.7%

Asset Returns – PERS



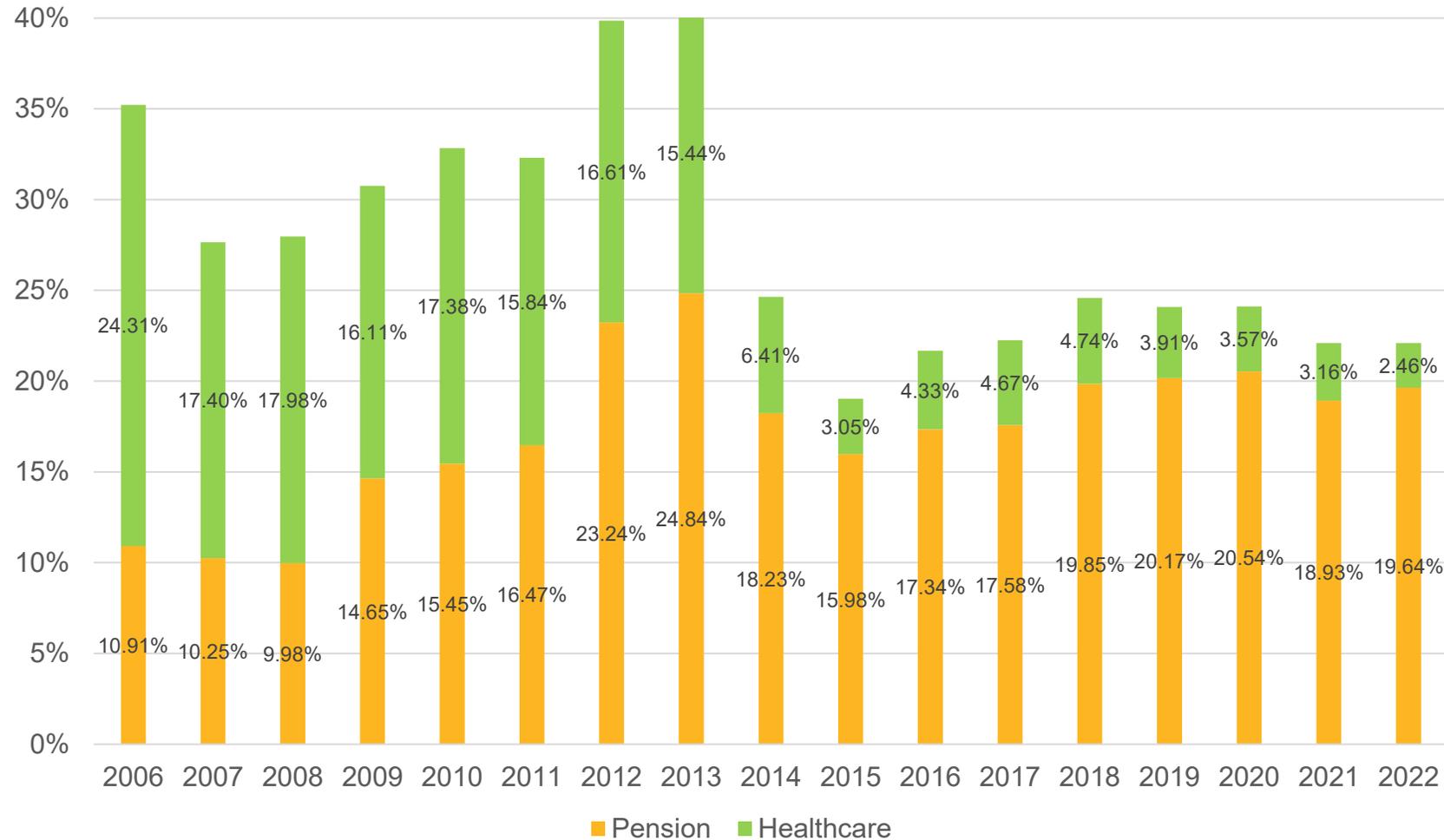
The spike in actuarial return in 2014 is due to the reset of actuarial value to market value that was effective 6/30/14.

Asset Returns – TRS



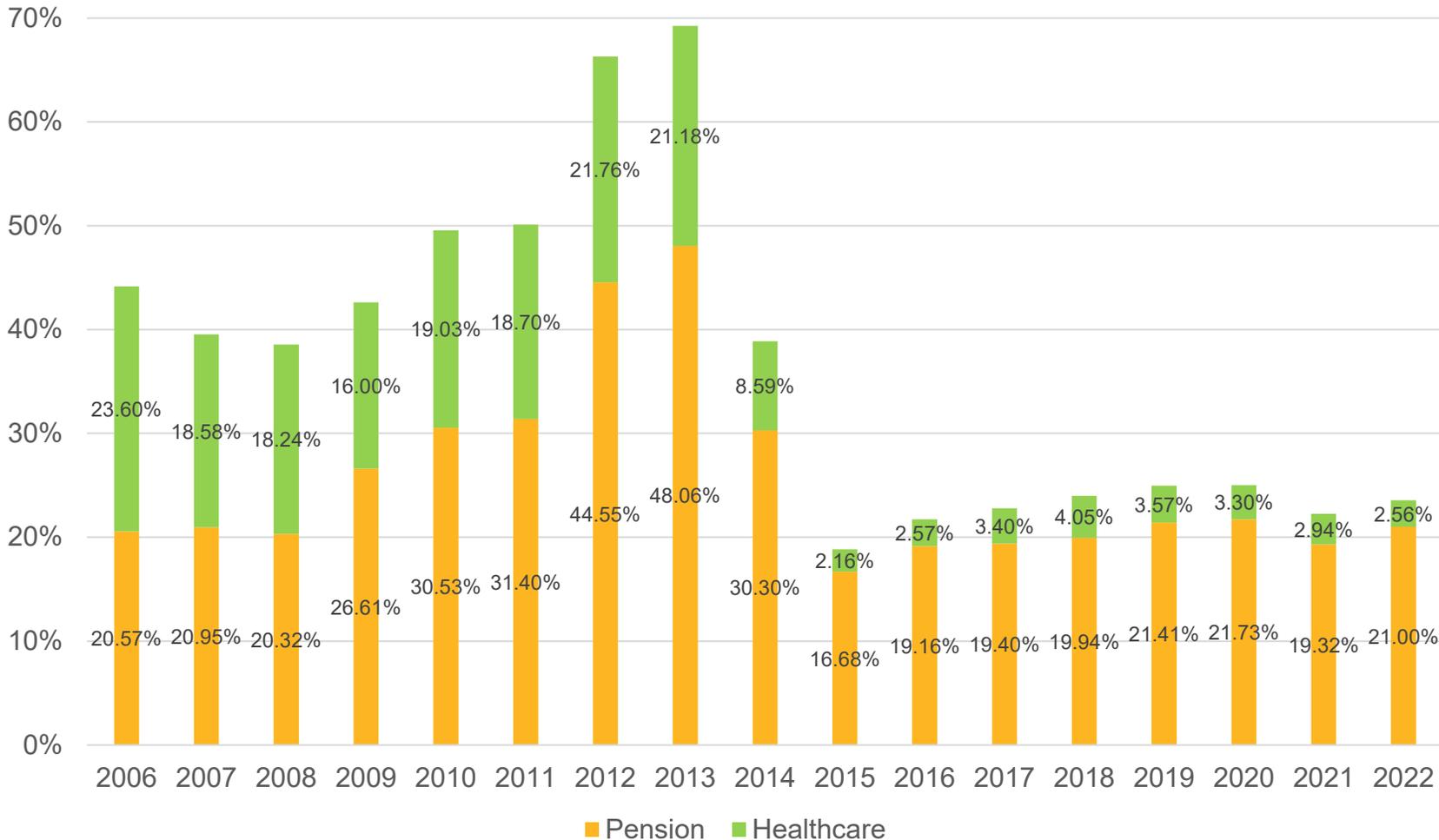
The spike in actuarial return in 2014 is due to the reset of actuarial value to market value that was effective 6/30/14.

June 30 Valuation Contribution Rates – PERS



Rates shown for June 30, 2006 through June 30, 2013 are the ARMB-adopted contribution rates for the fiscal year beginning two years later. Starting with the June 30, 2014 valuations, the ARMB-adopted contribution rates (not shown on this slide) are based on a 2-year roll-forward of liabilities and a 1-year roll-forward of assets to the fiscal year beginning two years later. All rates are a percentage of DB/DCR payroll.

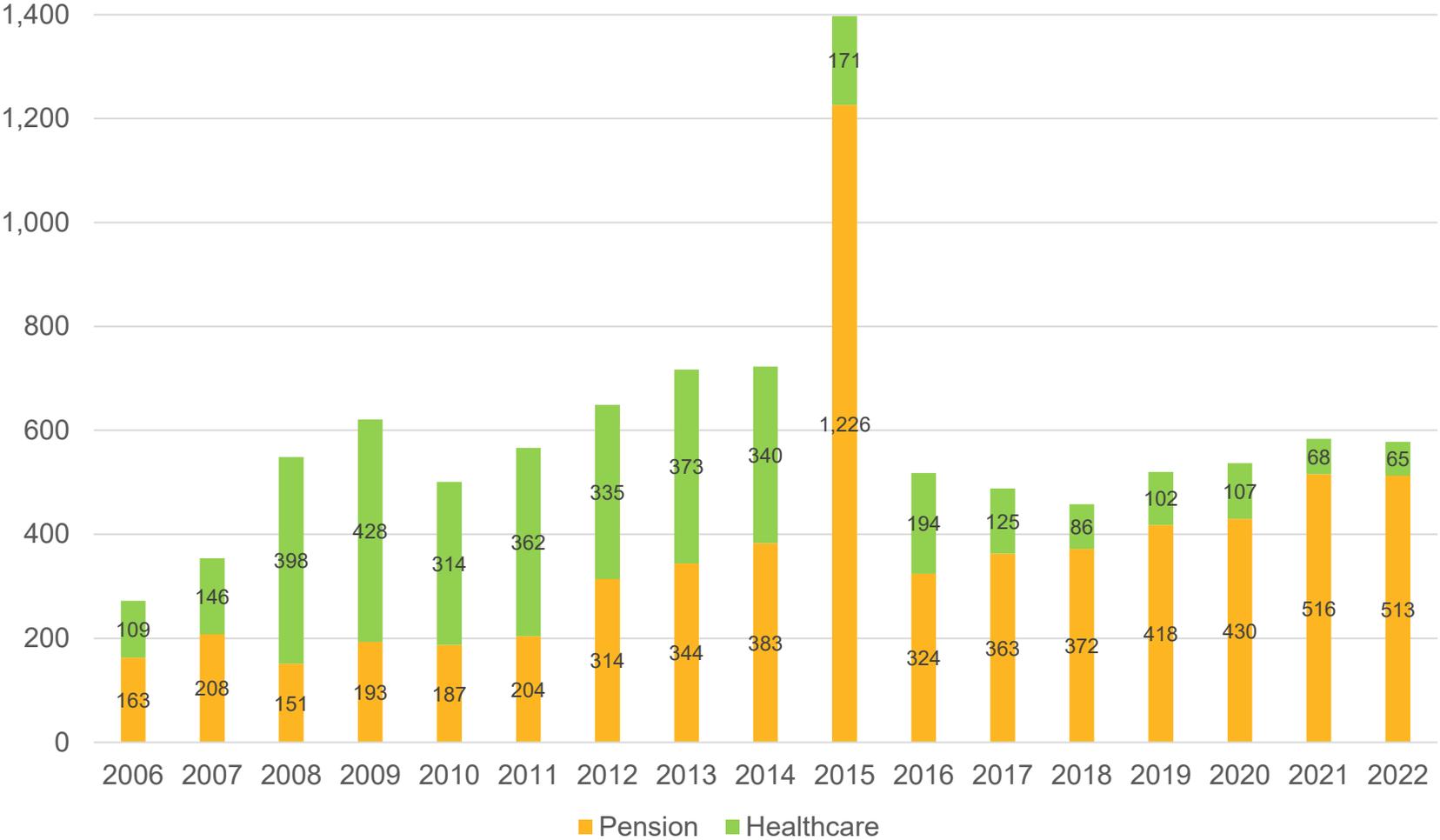
June 30 Valuation Contribution Rates – TRS



Rates shown for June 30, 2006 through June 30, 2013 are the ARMB-adopted contribution rates for the fiscal year beginning two years later. Starting with the June 30, 2014 valuations, the ARMB-adopted contribution rates (not shown on this slide) are based on a 2-year roll-forward of liabilities and a 1-year roll-forward of assets to the fiscal year beginning two years later. All rates are a percentage of DB/DCR payroll.

Employer/State Contributions – PERS

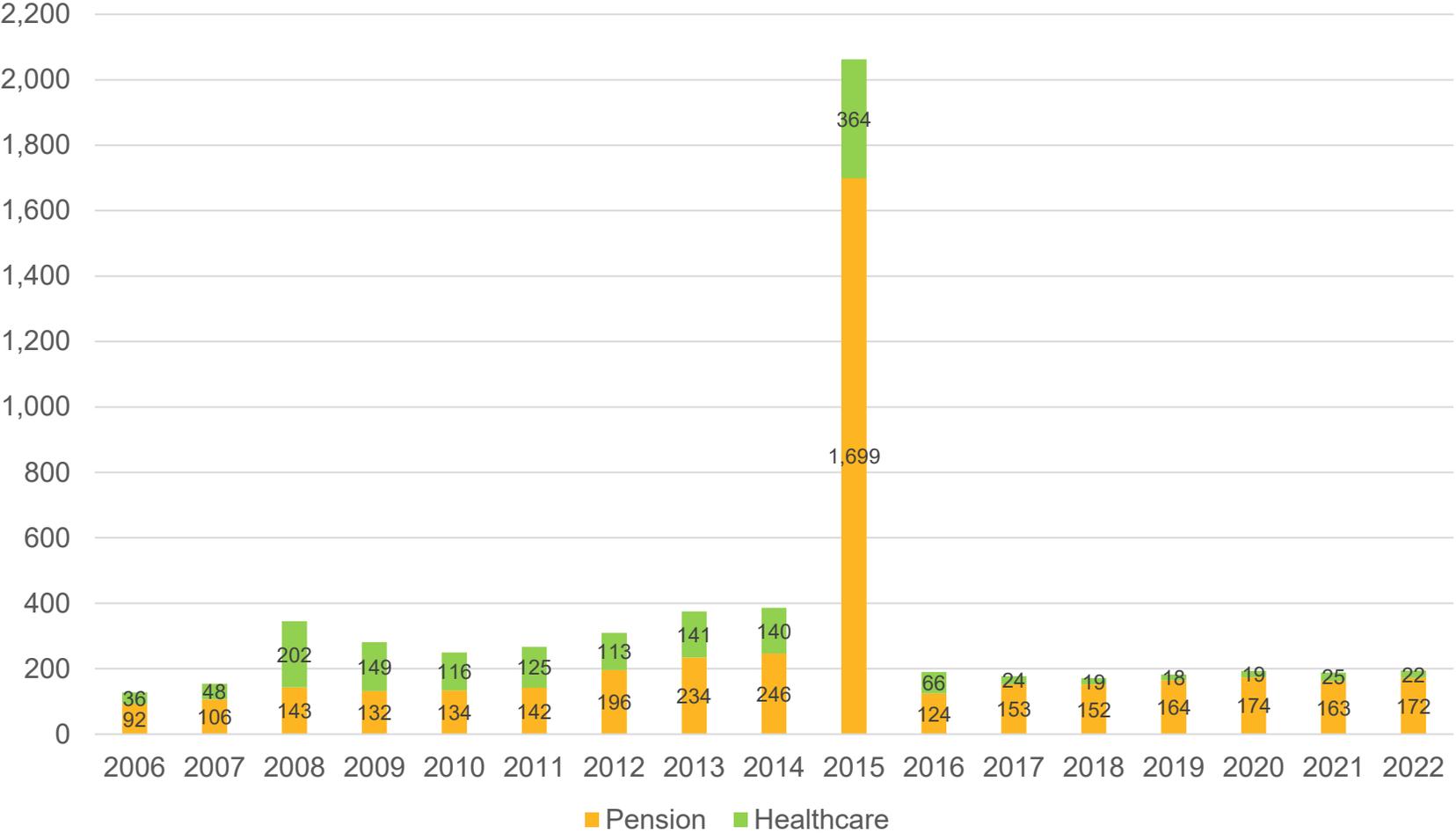
(\$millions)



The spike in 2015 is due to the \$1B Additional State Contribution that was made to PERS in FY15.

Employer/State Contributions – TRS

(\$millions)

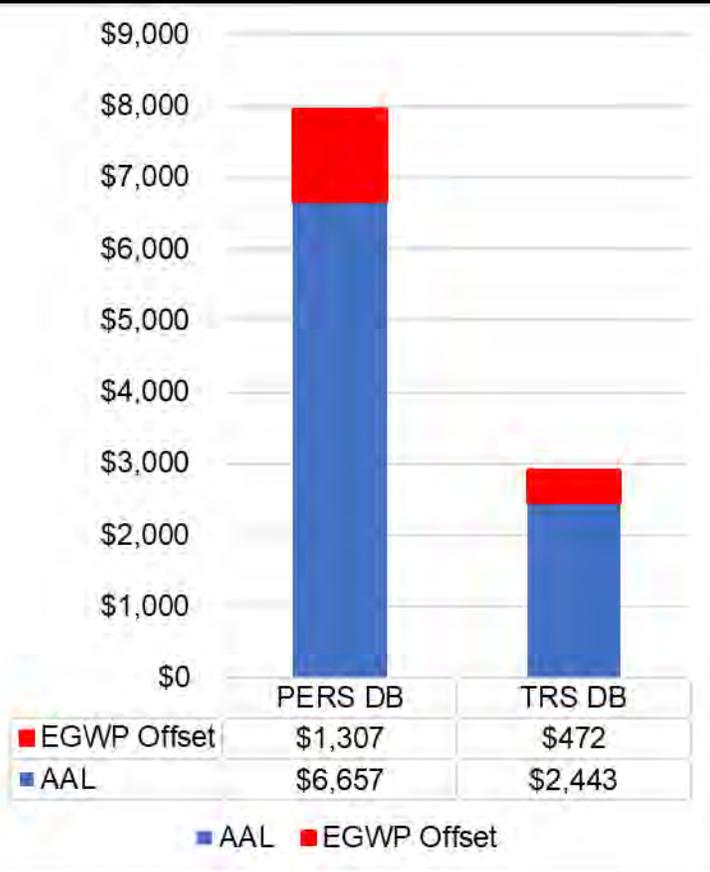


The spike in 2015 is due to the \$2B Additional State Contribution that was made to TRS in FY15.

Inflation Reduction Act of 2022 (IRA 2022) Update

FY22 AAL in \$Millions

EGWP subsidies are offsetting more than 16% of Liabilities



EGWP Subsidies Impact on AAL

EGWP subsidies funded by the federal government and pharmaceutical manufacturers reduce the plans' liabilities.

	2021	2022		
PERS DB (\$Millions)	Valuation	Valuation	Change \$	Change %
AAL without EGWP	8,008	7,964	(44)	-0.5%
EGWP Subsidy Offset \$	(1,152)	(1,307)	(155)	13.5%
AAL with EGWP	6,856	6,657	(199)	-2.9%
EGWP Subsidy Offset %	(14.4)%	(16.4)%		

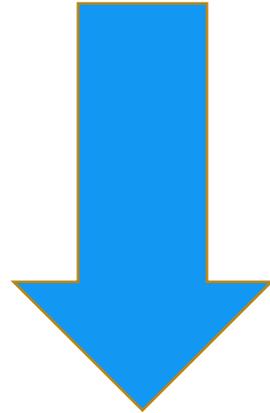
	2021	2022		
TRS DB (\$Millions)	Valuation	Valuation	Change \$	Change %
AAL without EGWP	2,841	2,914	73	2.6%
EGWP Subsidy Offset \$	(401)	(472)	(70)	17.5%
AAL with EGWP	2,440	2,443	3	0.1%
EGWP Subsidy Offset %	(14.1)%	(16.2)%		

Note: Amounts may differ due to rounding.

Expected Impacts of IRA 2022 on EGWPs

Good News

- Pharmaceutical companies required to pay rebates if drug prices rise faster than inflation starting in 2023.
- CMS to negotiate prices for top spend older Medicare drugs, first effective in 2026.
- Above changes suggest lowering long-term trend on Medicare Rx costs.



Bad News

- Funding from external sources is expected to decline starting in 2025.
- Notably, funding from external sources will drop from 80% to 40% in the catastrophic coverage phase.
- Less EGWP subsidies will mean higher Medicare Rx costs starting in 2025.

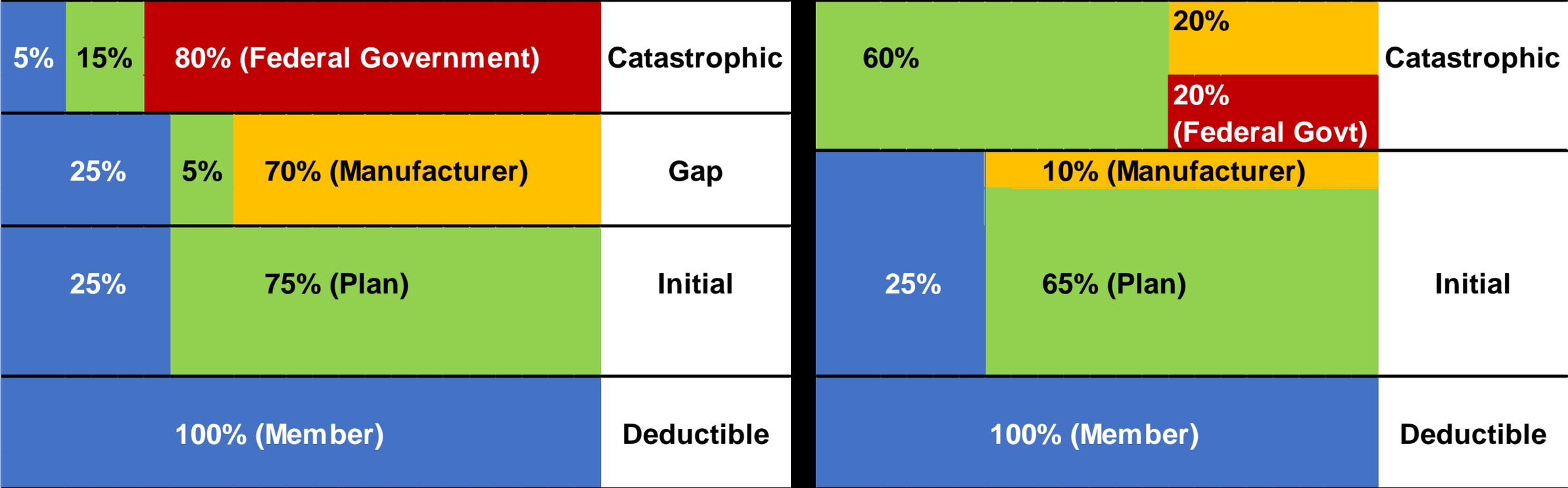
Standard Part D Design for Brand name Drugs

Current

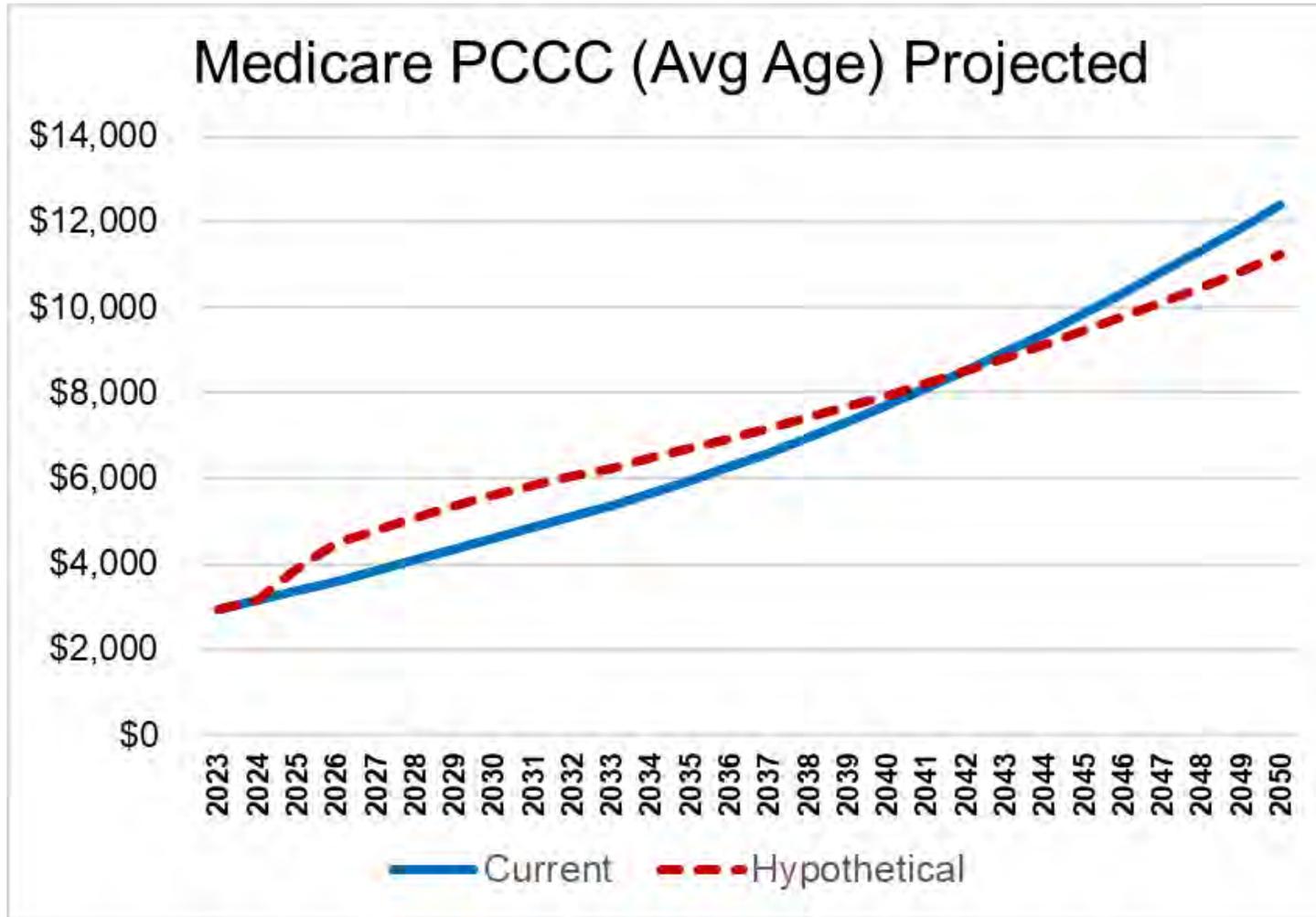
Coverage Phase

2025+

Coverage Phase



Possible Measurement Approach



Current:

- Medicare Rx costs projected at current assumed trend.
- Costs shown are for a Medicare member, reflecting current valuation EGWP subsidy offsets.

Hypothetical (illustrative example):

- Assume net Medicare Rx costs will increase due to lost external financing in 2025. An increase of 25% is shown in this example.
- Assume long-term Medicare Rx and EGWP health trends will decline starting in 2026 due to CMS price control measures. An ultimate trend rate of 3.5% is assumed for FYE-2031 and later in this example.

Next Steps

Next Steps

- Complete the DCR, JRS and NGNMRS valuations
- Run projections of assets, liabilities and contributions for PERS and TRS
- Prepare draft valuation reports
- Discuss these items at the March meeting

Actuarial Certification

Actuarial Certification

The purpose of this presentation is to provide the ARMB Actuarial Committee with preliminary June 30, 2022 valuation results for discussion at the November 30, 2022 meeting. More complete valuation results will be presented at the March 15, 2023 meeting. This presentation should be considered part of the June 30, 2022 actuarial valuation report services.

The data, assumptions, methods, and plan provisions used to determine the results shown in this presentation are as shown in the June 30, 2022 actuarial valuation reports (draft reports will be provided within the next few weeks). The June 30, 2022 actuarial valuation reports will include details related to potential risks associated with the plans, and information regarding our use of models.

Where presented, references to “funded ratio” and “unfunded actuarial accrued liability” typically are measured on an actuarial value of assets basis. It should be noted that the same measurements using market value of assets would result in different funded ratios and unfunded actuarial accrued liabilities. Moreover, the funded ratio presented is appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded status of the plan if the plan were to settle (i.e., purchase annuities) all or a portion of its liabilities.

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law.

The results were prepared under the direction of David Kershner and Steve Oates, both of whom meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. These results have been prepared in accordance with all applicable Actuarial Standards of Practice.

David Kershner
FSA, EA, MAAA, FCA
Principal, Retirement

Stephen Oates
ASA, EA, MAAA, FCA
Principal, Health



State of Alaska

Timeline for June 30, 2022 Valuations (PERS, TRS, PERS DCR, TRS DCR, JRS, NGNMRS)

Item #	Task	Original Deadline	Revised Deadline	Date Completed	Team Responsible	Comments / Notes
1	Enrollment data request to Aetna	7/15/22		7/14/22	Buck	
2	Valuation data request to DRB	7/15/22		7/15/22	Buck	
3	Monthly audit discussion with GRS / Buck	7/20/22	7/22/22	7/22/22	GRS / Buck	
4	Monthly audit discussion with GRS / Buck	8/17/22	8/19/22	not needed	GRS / Buck	
5	Preliminary 6/30/22 assets to Buck	8/30/22		8/31/22	DRB	These will be used only for the adoption of FY24 contribution rates.
6	Valuation data to Buck	9/2/22		9/6/22	DRB	
7	Send valuation data files received from DRB to GRS	9/6/22		9/6/22	Buck	
8	Actuarial Committee Meeting - FY24 contribution rates (based on 6/30/21 valuations)	9/14/22		9/14/22	All	Anchorage. Deadline for meeting materials is 8/26 (extended to 9/6 since assets not available until the end of August).
9	Audit data and sample lives request to Buck	9/16/22		9/17/22	GRS	
10	Monthly audit discussion with GRS / Buck	9/21/22			GRS / Buck	
11	Claims data request to Segal/DRB	9/23/22		9/6/22	Buck	Incurred claims through 6/30/22 that are paid through 8/31/22.
12	Data questions to DRB	9/23/22		9/27/22	Buck	PERS data questions sent on 9/26, TRS sent on 9/27.
13	Data answers to Buck	10/7/22		10/7/22	DRB	
14	Final 6/30/22 assets to Buck	10/14/22		10/21/22	DRB	
15	Monthly audit discussion with GRS / Buck	10/19/22	10/21/22	10/21/22	GRS / Buck	
16	Claims data to Buck	10/21/22		10/24/22	Segal / DRB	Incurred claims through 6/30/22 that are paid through 8/31/22.
17	6/30/22 valuation data and DRB data questions to GRS	10/28/22		11/7/22	Buck	PERS pension/PERS DCR sent on 10/28, TRS pension/TRS DCR sent on 11/4, PERS/TRS OPEB sent on 11/7.
18	Sample life information to GRS	11/11/22		11/14/22	Buck	All except PERS pension active sample lives sent on 11/11. PERS pension active sent on 11/14.
19	Monthly audit discussion with GRS / Buck	11/16/22	11/18/22		GRS / Buck	
20	Preliminary valuation results and PVB's by individual to GRS	11/18/22			Buck	
21	Actuarial Committee Meeting - 6/30/22 valuation results (preliminary)	11/30/22			All	Anchorage. Deadline for meeting materials is 11/14.
22	Monthly audit discussion with GRS / Buck	12/21/22			GRS / Buck	
23	Draft DCR valuation reports to GRS	1/6/23			Buck	
24	Monthly audit discussion with GRS / Buck	1/18/23	1/20/23		GRS / Buck	
25	Draft DB valuation reports to GRS	1/20/23			Buck	
26	Monthly audit discussion with GRS / Buck	2/15/23	2/17/23		GRS / Buck	
27	Draft actuarial review report to Buck	3/7/23			GRS	
28	Monthly audit discussion with GRS / Buck	3/15/23	3/8/23		GRS / Buck	
29	Actuarial Committee Meeting - 6/30/22 valuation results (full), projections, draft valuation reports	3/15/23			All	Juneau. Deadline for meeting materials is 2/24.
30	Monthly audit discussion with GRS / Buck	4/19/23			GRS / Buck	
31	ARMB Meeting - follow-up to March meeting (if needed)	April 2023 - TBD			All	Teleconference.
32	Monthly audit discussion with GRS / Buck	5/17/23			GRS / Buck	
33	Actuarial Committee Meeting - final valuation reports	6/14/23			All	Anchorage. Deadline for meeting materials is 5/26.

Note: All deadline and completion dates are specific to PERS and TRS.

Alaska Retirement Management Board

COMMITTEE SELF-ASSESSMENT

Actuarial Committee

Self-assessment within the meaning of the committee's charter may be achieved by discussion, at least twice a year, of the following questions:

	YES	NO
1. Are discussions at the committee level meaningful and, if not, what can be done about it?		
2. Is the committee touching on key issues; what key issues are being missed?		
3. Is the committee giving appropriate time to key issues?		
4. Does the work of the Actuarial Committee appropriately meet the needs of the Board by reducing necessary Board meeting time spent on the matters that come before the Actuarial Committee?		

Alaska Retirement Management Board
CHARTER OF THE ACTUARIAL COMMITTEE

I. Actuarial Committee Purpose.

The Actuarial Committee (Committee) assists the Alaska Retirement Management Board (Board) in fulfilling the Board's function of independent oversight of the integrity of the Alaska Retirement Management Board's (Board) retirement systems' actuarial valuations, experience analyses, and other requested reports and analysis, including compliance with legal, accounting, and regulatory requirements. It also serves as a conduit of communication between the Actuary, the Review Actuary, the Audit Actuary, Department of Administration (DOA) and Department of Revenue (DOR) staff, and the Board.

The Committee has the authority to conduct any review appropriate to fulfilling its responsibilities and it has direct access to the independent actuaries, as well as DOR and DOA management and staff, and legal counsel. The Committee may recommend that the Board retain, at Board expense and consistent with applicable procurement requirements, special legal, accounting, or other consultants or experts it considers necessary in the performance of its duties.

II. Actuarial Committee Responsibilities and Duties.

A. The Committee shall assist the Board in carrying out the following responsibilities:

1. Coordinate with the retirement system administrator to have an annual actuarial valuation of each retirement system prepared to determine system assets, accrued liabilities, and funding ratios and to certify to the appropriate budgetary authority of each employer in the system (A) an appropriate contribution rate for normal costs; (B) an appropriate contribution rate for liquidating any past service liability; in this subparagraph, the appropriate contribution rate for liquidating the past service liability of the defined benefit retirement plan under AS 14.25.009 - 14.25.220 or the past service liability of the defined benefit retirement plan under AS 39.35.095 - 39.35.680 must be determined by a level percent of pay method based on amortization of the past service liability for a closed term of 25 years;

2. Review actuarial assumptions prepared and certified by a member of the American Academy of Actuaries and conduct experience analyses of the retirement systems not less than once every four years, except for health cost assumptions, which shall be reviewed annually; the results of all actuarial assumptions prepared under this paragraph shall be reviewed and certified by a second member of the American Academy of Actuaries before presentation to the board.

3. Review the annual actuarial valuations and any actuarial experience analysis prepared by the Actuary and the report prepared by the Review Actuary prior to presentation or distribution of any report.

4. Coordinate with staff to conduct an independent audit of the state's actuary not less than once every four years and review any audit report prepared by the Audit Actuary prior to presentation or distribution to the Board.

5. In consultation with management and the independent actuaries, consider the integrity of the actuarial reporting processes and controls, including the process for "closure" on the audit findings.

6. Review any significant changes to applicable actuarial principles and any items required to be communicated by the independent actuaries.

7. Review the independence and performance of the actuaries and periodically recommend to the Board the appointment of the independent actuaries or recommend approval of any discharge of actuaries when circumstances warrant.

8. Review, discuss and recommend for Board consideration any strategic issues related to the actuarial work.

9. Review and assess the adequacy of this Charter at least annually and submit recommended changes to it to the Board for approval.

10. Review and periodically perform self-assessment of the Committee's performance.

B. The Committee shall have the following responsibilities with respect to the ARMB's independent actuaries:

1. Schedule an annual pre-valuation entrance conference with the Actuary that includes DOA and DOR staff and the Review Actuary to discuss scope, staffing, locations, timeline, reliance upon management, and general approach to the annual valuation conducted for the retirement systems; and in the year that an actuarial experience analysis is conducted, schedule a similar entrance conference.

2. Discuss with management and the independent actuaries the actuarial principles and provide input as to the underlying assumptions and methods used in the preparation of the retirement systems' valuation reports and experience analyses to ensure the integrity of actuarial numbers used in preparation of accounting reports, compliance with GASB or other regulatory bodies, consistency with the actuarial policies of the plan, and alignment with the purpose of the reporting.

3. Review the Actuary's draft valuation and the Review Actuary's draft report (and the experience analysis and review when conducted); discuss the contents with the actuaries and monitor the follow-up on significant observations, findings, and recommendations.

4. Discuss with the independent actuaries the clarity and format of the presentations in appearances before the committee and the Board.

5. Meet with the actuaries, in the absence of management, to review findings, recommendations or other pertinent subjects.

6. Review Audit Actuary report (conducted every four years); discuss any significant findings with Actuary and management.

C. In addition to the foregoing, the Committee shall:

1. Perform such other activities consistent with this Charter, and governing law as the Committee considers necessary or appropriate or as the Board may otherwise request.

2. Maintain minutes of Committee meetings and periodically report to the Board on significant results of the Committee's activities.

Alaska Retirement Management Board

Actuarial Committee Schedule of 2023 Meetings

March 15, 2023 (Juneau/ Videoconference)

1. Discuss Draft Review Actuary Report;
2. Review Draft Valuation Reports; requests or recommendations for edits or corrections
3. Review Audit Findings List; proposed resolution and recommendations
4. Optional Renewal for Actuary Contract (Buck) for FY24
4. Education Topic:

April TBD, 2023 (Videoconference)

1. *If necessary* – scheduled to follow up on discussion/findings/questions from March meeting

June 14, 2023 (Anchorage/ Videoconference)

1. Review and discussion of final review reports and valuations, including any items brought forward from March meeting
2. Action: Recommendations from committee to board for acceptance of review reports and valuations
3. Recommendation from committee to board for action on Audit Findings List
4. FY2023 valuation discussion
 - a. Valuation Timeline
 - b. Actuarial principles and underlying assumptions; any proposed new assumptions
 - c. Outstanding audit issues (Audit Findings List)
5. Committee Performance – Self Assessment
6. Education Topic:

September 13, 2023 (Anchorage/ Videoconference)

1. Review contribution rate resolutions/action memos for recommendation to Board
2. Status/Follow-up from previous meetings
3. Education Topic:

December 6, 2023 (Anchorage/ Videoconference)

1. Status Report/Discussion on Draft Actuarial Valuation and Second Actuary Review Process
2. Discussion of new trends and findings in actuarial matters
3. Committee Performance – Self Assessment
4. Education topic:

Periodic and As Needed Meeting Topics

1. Updates by DOA on actuary procurement.
2. Actuarial Committee training.